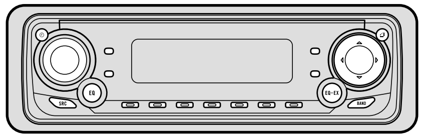
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Service Manual



DEH-P750MP/XN/UC

ORDER NO.
CRT3050

MULTI-CD CONTROL HIGH POWER CD/MP3/WMA PLAYER WITH FM/AM TUNER

DEH-P750MP XN/UC
DEH-P7500MP XN/UC
DEH-P7550MP XN/ES

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-3057	CRT3026	S10MP3	CD Mech. Module:Circuit Description, Mech.Description, Disassembly



For details, refer to "Important symbols for good services".

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K-ZZD. APR. 2003 Printed in Japan

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety
You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments
To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning
For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws
To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts
Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

SAFETY INFORMATION

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

● CD Section Precaution

1. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
2. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY" on page 64.
3. After replacing the pickup unit, be sure to check the grating. (See p.60.)

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1. SPECIFICATIONS

DEH-P750MP/XN/UC, DEH-P7500MP/XN/UC

General

Power source .... 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system .... Negative type
Max. current consumption
.... 10.0 A
Buckup current .... 5mA or less
Dimensions (W × H × D):
DIN
Chassis .... 178 × 50 × 157 mm
(7 × 2 × 6-1/8 in.)
Nose .... 188 × 58 × 19 mm
(7-3/8 × 2-1/4 × 3/4 in.)
D
Chassis .... 178 × 50 × 162 mm
(7 × 2 × 6-3/8 in.)
Nose .... 170 × 46 × 14 mm
(6-3/4 × 1-3/4 × 1/2 in.)
Weight .... 1.4 kg (3.1 lbs)

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output .... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance .... 4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance
.... 6.5V/100Ω (DEH-P750MP)
.... 4.0 V/100Ω (DEH-P7500MP)
Equalizer (3-Band Parametric Equalizer):
Low
Frequency .... 40/80/100/160 Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
Mid
Frequency .... 200/500/1k/2k Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
High
Frequency .... 3.15k/8k/10k/12.5k Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12dB
Loudness contour
Low .... +3.5 dB (100 Hz), +3 dB (10 kHz)
Mid .... +10 dB (100 Hz), +6.5 dB (10 kHz)
High .... +11 dB (100 Hz), +11 dB (10 kHz)
(volume: –30 dB)
Tone controls:
Bass
Frequency .... 40/63/100/160 Hz
Gain .... ±12dB
Treble
Frequency .... 2.5k/4k/6.3k/10k Hz
Gain .... ±12dB
HPF:
Frequency .... 50/80/125 Hz
Slope .... –12 dB/oct
Subwoofer:
Frequency .... 50/80/125 Hz
Slope .... –18 dB/oct
Gain .... ±12dB
Phase .... Normal/Reverse

CD player

System .... Compact disc audio system
Usable discs .... Compact disc
Signal format:
Sampling frequency .... 44.1 kHz
Number of quantization bits
.... 16; linear
Frequency characteristics .... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio .... 94 dB (1 kHz) (IHF-A network)
Dynamic range .... 92 dB (1 kHz)
Number of channels .... 2 (stereo)
MP3 decoding format .... MPEG-1 & 2 Audio Layer 3
WMA decoding format .... Ver. 7 & 8

FM tuner

Frequency range .... 87.9 – 107.9 MHz
Usable sensitivity .... 8 dBf (0.7 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity .... 10 dBf (0.9 µV/75 Ω, mono)
Signal-to-noise ratio .... 75 dB (IHF-A network)
Distortion .... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response .... 30 – 15,000 Hz (±3 dB)
Stereo separation .... 45 dB (at 65 dBf, 1 kHz)
Selectivity .... 80 dB (±200 kHz)
Three-signal intermodulation (desired signal level)
.... 30 dBf (two undesired signal level: 100 dBf)

AM tuner

Frequency range .... 530 – 1,710 kHz (10 kHz)
Usable sensitivity .... 18 µV (S/N: 20 dB)
Signal-to-noise ratio .... 65 dB (IHF-A network)

Note

Specifications and the design are subject to possible modifications without notice due to improvements.

DEH-P7550MP/XN/ES

General

Rated power source .... 14.4 V DC (allowable voltage range: 12.0 – 14.4 V DC)
Grounding system .... Negative type
Max. current consumption .... 10.0 A
Buckup current .... 5mA or less
Dimensions (W × H × D):
- DIN
  - Chassis .... 178 × 50 × 157 mm
  - Nose .... 188 × 58 × 19 mm
- D
  - Chassis .... 178 × 50 × 162 mm
  - Nose .... 170 × 46 × 14 mm

Weight .... 1.4 kg

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.

Maximum power output .... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance .... 4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance 4.0 V/100Ω
Equalizer (3-Band Parametric Equalizer):
- Low
  - Frequency .... 40/80/100/160 Hz
  - Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain .... ±12dB
- Mid
  - Frequency .... 200/500/1k/2k Hz
  - Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain .... ±12dB
- High
  - Frequency .... 3.15k/8k/10k/12.5k Hz
  - Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain .... ±12dB

Loudness contour
- Low .... +3.5 dB (100 Hz), +3 dB (10 kHz)
- Mid .... +10 dB (100 Hz), +6.5 dB (10 kHz)
- High .... +11 dB (100 Hz), +11 dB (10 kHz) (volume: –30 dB)

Tone controls:
- Bass
  - Frequency .... 40/63/100/160 Hz
  - Gain .... ±12dB
- Treble
  - Frequency .... 2.5k/4k/6.3k/10k Hz
  - Gain .... ±12dB

HPF:
- Frequency .... 50/80/125 Hz
- Slope .... –12 dB/oct

Subwoofer:
- Frequency .... 50/80/125 Hz
- Slope .... –18 dB/oct
- Gain .... ±12dB
- Phase .... Normal/Reverse

CD player

System .... Compact disc audio system
Usable discs .... Compact disc
Signal format:
- Sampling frequency ..... 44.1 kHz
- Number of quantization bits .... 16; linear

Frequency characteristics ... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio .... 94 dB (1 kHz) (IEC-A network)
Dynamic range .... 92 dB (1 kHz)
Number of channels .... 2 (stereo)
MP3 decoding format .... MPEG-1 & 2 Audio Layer 3
WMA decoding format .... Ver. 7 & 8

FM tuner

Frequency range .... 87.5 – 108.0 MHz
Usable sensitivity .... 8 dBf (0.7 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 µV/75 Ω, mono)
Signal-to-noise ratio .... 75 dB (IEC-A network)
Distortion .... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response .... 30 – 15,000 Hz (±3 dB)
Stereo separation .... 45 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range .... 531 – 1,602 kHz (9 kHz)
530 – 1,640 kHz (10 kHz)
Usable sensitivity .... 18 µV (S/N: 20 dB)
Signal-to-noise ratio .... 65 dB (IEC-A network)

Infrared remote control

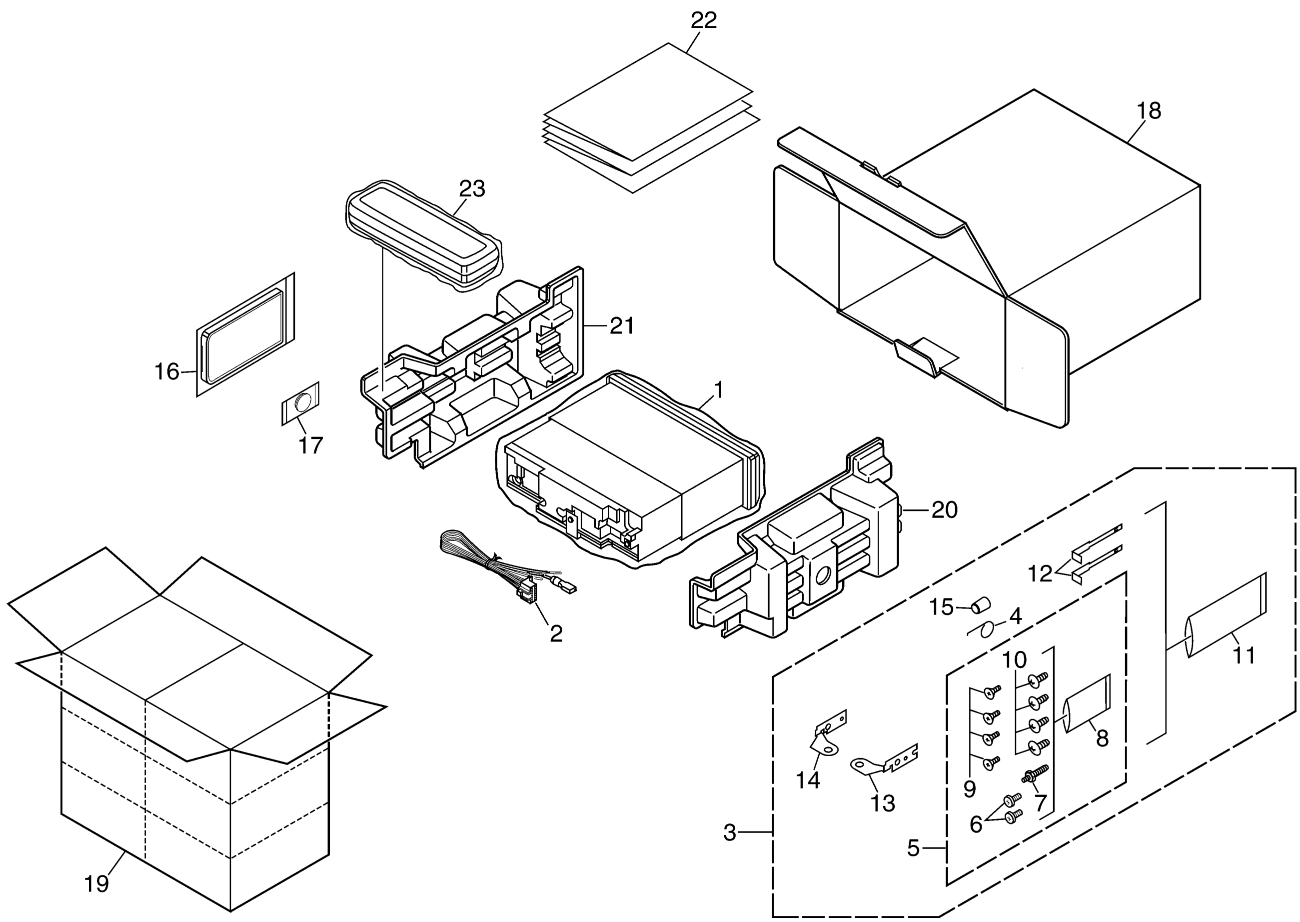
Wavelength .... 940 nm ±50 nm
Output .... typ; 12 mw/sr per Infrared LED

Note

Specifications and the design are subject to possible modifications without notice due to improvements.

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING



NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
  (In the case of no amount instructions, apply as you think it appropriate.)

(1) PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Polyethylene Bag	See Contrast table(2)
	2	Cord Assy	CDE7154
	3	Accessory Assy	See Contrast table(2)
	4	Spring	CBH1650
	5	Screw Assy	See Contrast table(2)
	6	Fixing Screw	See Contrast table(2)
	7	Screw	CBA1650
*	8	Polyethylene Bag	CEG-127
	9	Screw	CRZ50P090FTC
	10	Screw	TRZ50P080FTC
*	11	Polyethylene Bag	CEG-158
	12	Handle	CNC5395
	13	Holder	See Contrast table(2)
	14	Holder	See Contrast table(2)
	15	Bush	CNV3930
	16	Remote Control Unit	See Contrast table(2)
*	17	Battery	See Contrast table(2)
	18	Carton	See Contrast table(2)
	19	Contain Box	See Contrast table(2)
	20	Protector	CHP2663
	21	Protector	CHP2664
	22-1	Owner's Manual	See Contrast table(2)
	22-2	Owner's Manual	See Contrast table(2)
	22-3	Installation Manual	See Contrast table(2)
*	22-4	Caution Card	See Contrast table(2)
*	22-5	Card	See Contrast table(2)
*	22-6	Caution Card	CRP1207
*	22-7	Warranty Card	See Contrast table(2)
	23	Case Assy	CXB3520

(2) CONTRAST TABLE

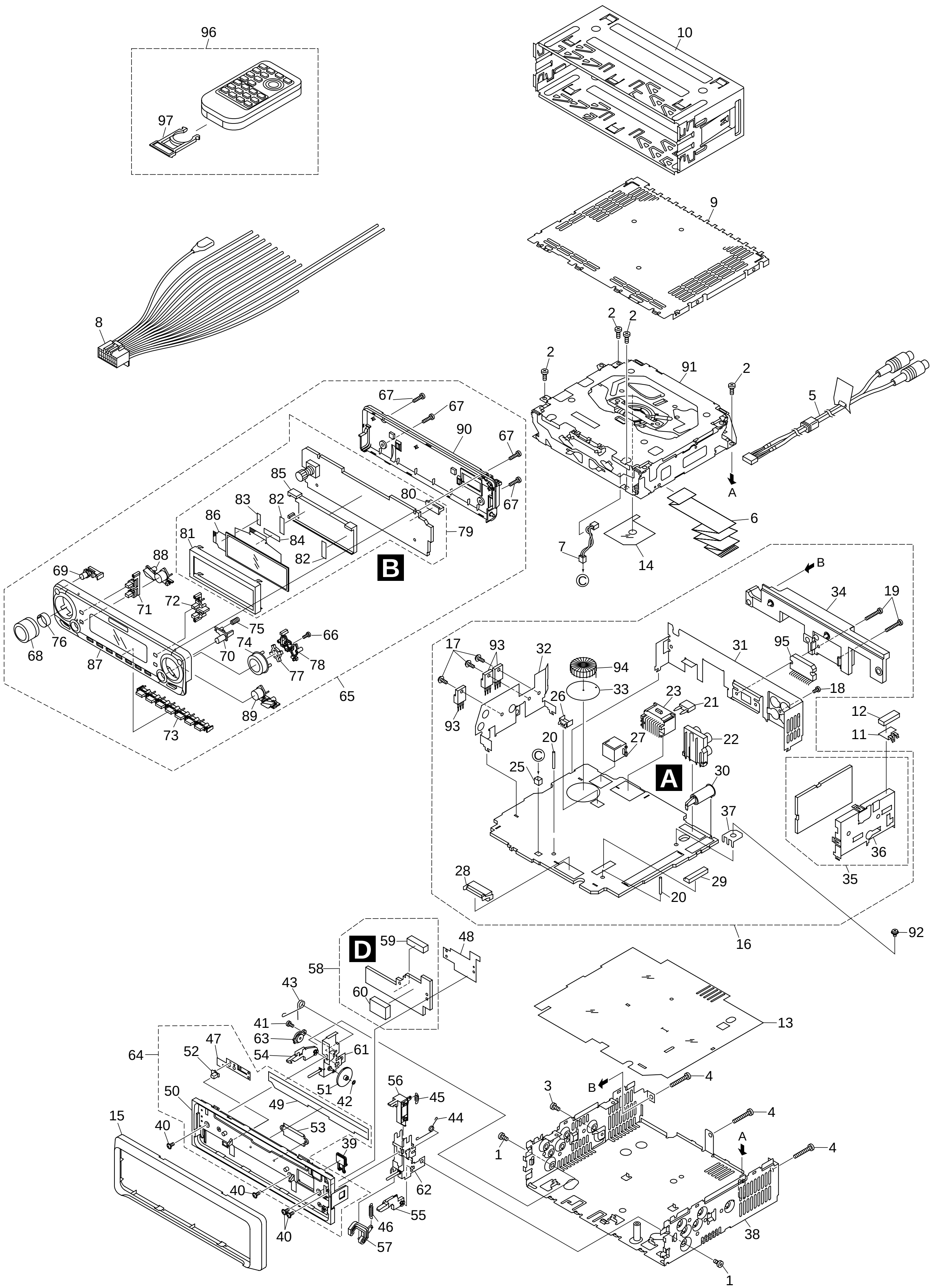
DEH-P750MP/XN/UC, DEH-P7500MP/XN/UC and DEH-P7550MP/XN/ES are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No. DEH-P750MP/XN/UC	DEH-P7500MP/XN/UC	DEH-P7550MP/XN/ES
	1	Polyethylene Bag	CEG1173	CEG1173	CEG-162
	3	Accessory Assy	CEA3376	CEA3376	CEA3439
	5	Screw Assy	CEA3848	CEA3848	CEA3849
	6	Fixing Screw	BPZ20P060FZK	BPZ20P060FZK	Not used
	13	Holder	CND1249	CND1249	Not used
	14	Holder	CND1250	CND1250	Not used
	16	Remote Cotrol Unit	CXC1361	CXC1361	CXC1265
*	17	Battery	Not used	Not used	CEX1065
	18	Carton	CHG5089	CHG5088	CHG5087
	19	Contain Box	CHL5089	CHL5088	CHL5087
	22-1	Owner's Manual	CRD3767	CRD3769	CRD3771
	22-2	Owner's Manual	Not used	Not used	CRD3772
	22-3	Installation Manual	CRD3768	CRD3770	CRD3773
*	22-4	Caution Card	Not used	Not used	CRP1216
*	22-5	Card	Not used	ARY1048	Not used
*	22-7	Warranty Card	CRY1070	Not used	Not used

● Owner's Manual, Installation Manual

Model	Part No.	Language
DEH-P750MP/XN/UC	CRD3767	English, Spanish
	CRD3768	English, Spanish
DEH-P7500MP/XN/UC	CRD3769	English, Spanish
	CRD3770	English, Spanish
DEH-P7550MP/XN/ES	CRD3771	English, Spanish, Portuguese(B)
	CRD3772	Traditional chinese, Arabic
	CRD3773	English, Spanish, Portuguese(B), Traditional chinese, Arabic

2.2 EXTERIOR(DEH-P750MP/XN/UC,DEH-P7500MP/XN/UC)



(1) EXTERIOR(DEH-P750MP/XN/UC, DEH-P7500MP/XN/UC) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FZK
	2	Screw	BSZ26P060FTC
	3	Screw	BSZ30P060FTC
	4	Screw	BSZ30P200FTC
	5	Cord Assy	CDE7129
	6	Flat Cable	CDE7149
	7	Cord Assy	CDE7150
	8	Cord Assy	CDE7154
	9	Case	CNB2870
	10	Holder	CNC8659
	11	Earth Plate	CNC8915
	12	Cushion	CNM4870
	13	Insulator	CNM7935
	14	Insulator	CNM8174
	15	Panel	See Contrast table(2)
	16	Tuner Amp Unit	See Contrast table(2)
	17	Screw	ASZ26P060FTC
	18	Screw	BPZ26P080FTC
	19	Screw	BSZ26P160FTC
	20	Clamper	CEF1035
	21	Fuse(10A)	CEK1208
	22	Pin Jack(CN361)	CKB1051
	23	Plug(CN981)	CKM1376
	24	•••••	
	25	Plug(CN704)	CKS-783
	26	Plug(CN362)	CKS1238
	27	Connector(CN101)	CKS3408
	28	Plug(CN801)	CKS3537
	29	Connector(CN701)	CKS3837
	30	Antenna Jack(CN401)	CKX1056
	31	Holder	CND1239
	32	Holder	CND1352
	33	Insulator	CNM8245
	34	Heat Sink	CNR1668
	35	FM/AM Tuner Unit	CWE1646
	36	Holder	CND1054
	37	Terminal(CN402)	VNF1084
	38	Chassis Unit	CXB9528
	39	Button(EJECT)	CAC7752
	40	Screw(M2x4.5)	CBA1647
	41	Screw(M2x4)	CBA1649
	42	Washer	CBF1038
	43	Spring	CBH2650
	44	Spring	CBH2651
	45	Spring	CBH2652
	46	Spring	CBH2653
	47	Spring	CBL1512
	48	Holder	CND1254
	49	Cover	CNM6854
	50	Panel	CNS7245
	51	Gear	CNV5997
	52	Pin	CNV6486
	53	Lighting Conductor	CNV6487
	54	Arm	CNV7400
	55	Arm	CNV7401
	56	Arm	CNV7402
	57	Arm	CNV7403
	58	Panel Unit	CWM8758
	59	Socket(CN1950)	CKS3550
	60	Connector(CN1951)	CKS4462
	61	Holder Unit	CXB9501
	62	Holder Unit	CXB9502
	63	Damper Unit	CXB9503
	64	Panel Unit(Service)	CXX1691
	65	Detach Grille Assy	See Contrast table(2)
	66	Screw	BPZ20P060FTC
	67	Screw	BPZ20P100FZK
	68	Knob	See Contrast table(2)
	69	Button(CLK)	CAC7751
	70	Button(OPEN)	CAC7728
	71	Button(TEXT/SCRL)	CAC7737
	72	Button(AUDIO/FUNC)	CAC7738
	73	Button(1-6)	CAC7750
	74	Button(CROSS)	See Contrast table(2)
	75	Spring	CBH2654
	76	Spring	CBL1470
	77	Cushion	CNM8291
	78	Holder	CNV7405
	79	Keyboard Unit	CWM8713
	80	Connector(CN1901)	CKS4524
	81	Holder	CND1354
	82	Cushion	CNM6633
	83	Spacer	CNM7697
	84	Spacer	CNM7698
	85	Holder	CNV6910
	86	OEL Unit	MXS8045
	87	Grille Unit	See Contrast table(2)
	88	Button Unit(SRC/EQ)	CXB9924
	89	Button Unit(EQ-EX/BAND)	CXB9925
	90	Cover	XNS7014
	91	CD Mechanism Module(S10MP3)	CXK5662
	92	Screw	ISS26P055FTC
	93	Transistor(Q742,901,921)	2SD2375
	94	Choke Coil(L981)	CTH1280
	95	IC(IC301)	PAL007A
	96	Remote Control Unit	CXC1361
	97	Cover	CZN5357

A

(2) CONTRAST TABLE

DEH-P750MP/XN/UC and DEH-P7500MP/XN/UC are constructed the same except for the following:

Mark No.	Symbol and Description	Part No.	
		DEH-P750MP/XN/UC	DEH-P7500MP/XN/UC
15	Panel	CNS6935	CNS6934
16	Tuner Amp Unit	CWM8707	CWM8708
65	Detach Grille Assy	CXB9914	CXB9913
68	Knob	CAA2764	CAA2761
74	Button(CROSS)	CAC7843	CAC7863
87	Grille Unit	CXB9855	CXB9853

B

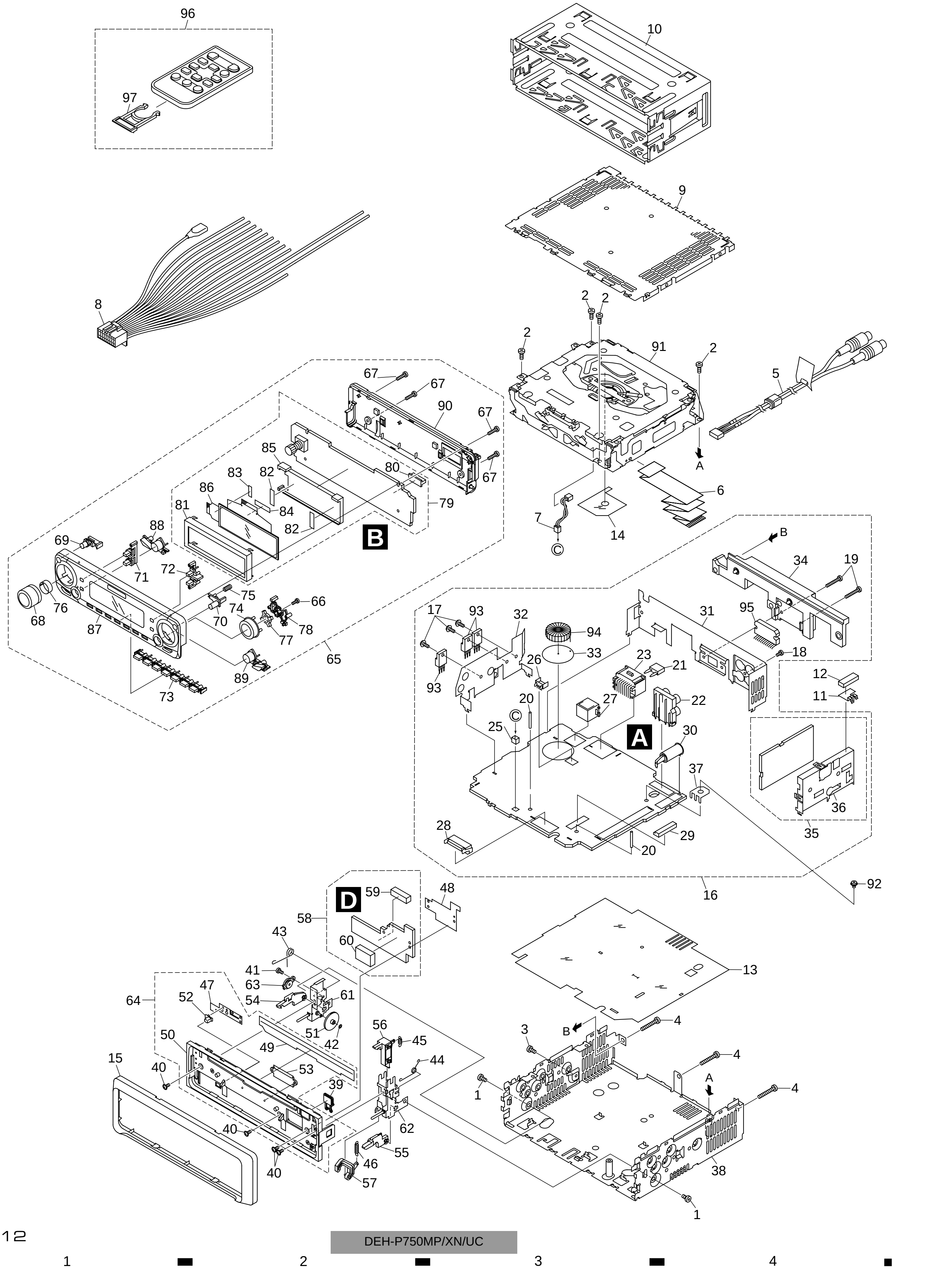
C

D

E

F

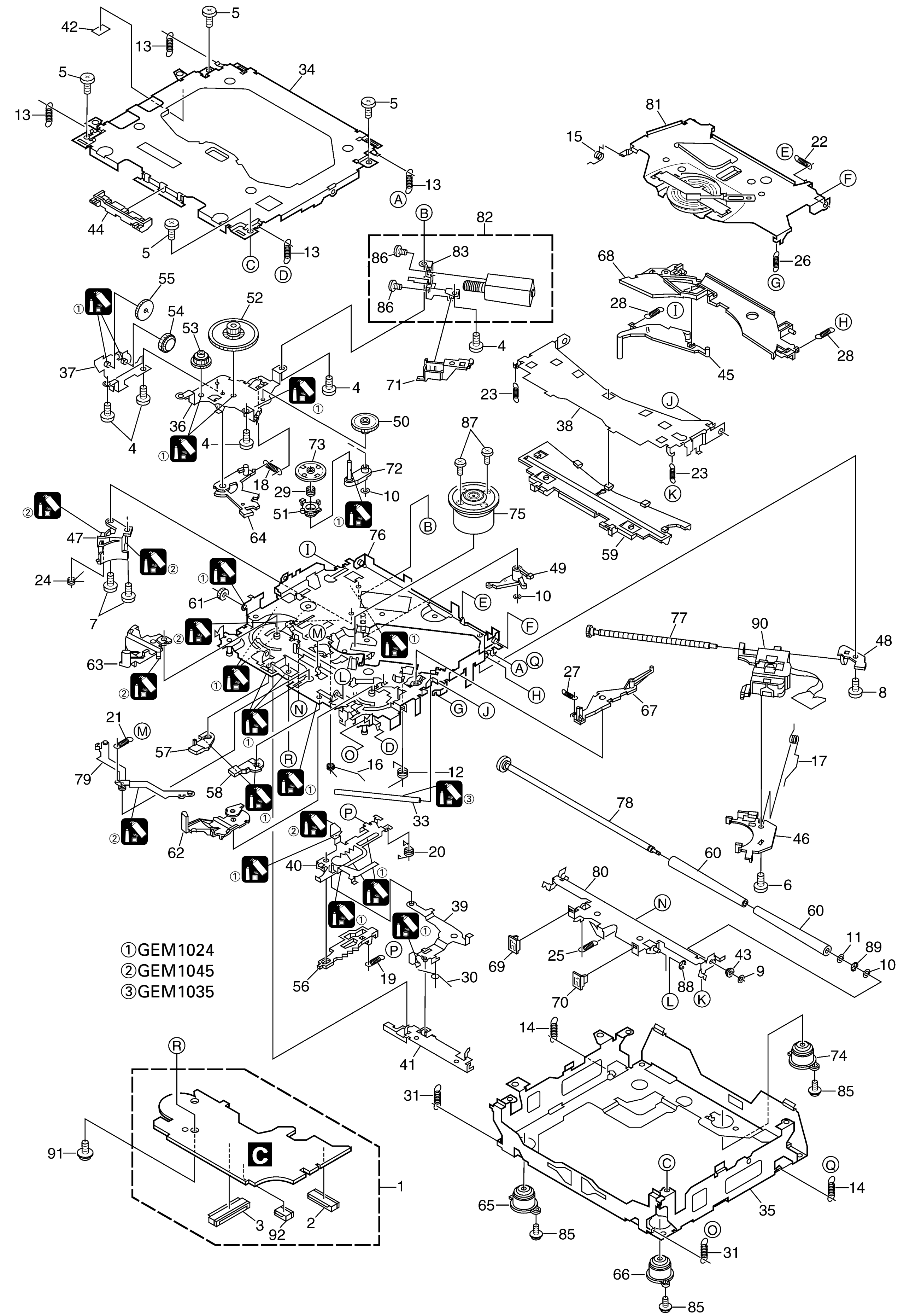
2.3 EXTERIOR(DEH-P7550MP/XN/ES)



● EXTERIOR(DEH-P7550MP/XN/ES) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FZK
	2	Screw	BSZ26P060FTC
	3	Screw	BSZ30P060FTC
	4	Screw	BSZ30P200FTC
	5	Cord Assy	CDE7129
	6	Flat Cable	CDE7149
	7	Cord Assy	CDE7150
	8	Cord Assy	CDE7154
	9	Case	CNB2870
	10	Holder	CNC8659
	11	Earth Plate	CNC8915
	12	Cushion	CNM4870
	13	Insulator	CNM7935
	14	Insulator	CNM8174
	15	Panel	CNS6935
	16	Tuner Amp Unit	CWM8709
	17	Screw	ASZ26P060FTC
	18	Screw	BPZ26P080FTC
	19	Screw	BSZ26P160FTC
	20	Clamper	CEF1035
	21	Fuse(10A)	CEK1208
	22	Pin Jack(CN361)	CKB1051
	23	Plug(CN981)	CKM1376
	24	•••••	
	25	Plug(CN704)	CKS-783
	26	Plug(CN362)	CKS1238
	27	Connector(CN101)	CKS3408
	28	Plug(CN801)	CKS3537
	29	Connector(CN701)	CKS3837
	30	Antenna Jack(CN401)	CKX1056
	31	Holder	CND1239
	32	Holder	CND1352
	33	Insulator	CNM8245
	34	Heat Sink	CNR1668
	35	FM/AM Tuner Unit	CWE1646
	36	Holder	CND1054
	37	Terminal(CN402)	VNF1084
	38	Chassis Unit	CXB9528
	39	Button(EJECT)	CAC7752
	40	Screw(M2x4.5)	CBA1647
	41	Screw(M2x4)	CBA1649
	42	Washer	CBF1038
	43	Spring	CBH2650
	44	Spring	CBH2651
	45	Spring	CBH2652
	46	Spring	CBH2653
	47	Spring	CBL1512
	48	Holder	CND1254
	49	Cover	CNM6854
	50	Panel	CNS7245
	51	Gear	CNV5997
	52	Pin	CNV6486
	53	Lighting Conductor	CNV6487
	54	Arm	CNV7400
	55	Arm	CNV7401
	56	Arm	CNV7402
	57	Arm	CNV7403
	58	Panel Unit	CWM8758
	59	Socket(CN1950)	CKS3550
	60	Connector(CN1951)	CKS4462
	61	Holder Unit	CXB9501
	62	Holder Unit	CXB9502
	63	Damper Unit	CXB9503
	64	Panel Unit(Service)	CXX1691
	65	Detach Grille Assy	CXB9915
	66	Screw	BPZ20P060FTC
	67	Screw	BPZ20P100FZK
	68	Knob	CAA2764
	69	Button(CLK)	CAC7751
	70	Button(OPEN)	CAC7728
	71	Button(TEXT/SCRL)	CAC7737
	72	Button(AUDIO/FUNC)	CAC7738
	73	Button(1-6)	CAC7750
	74	Button(CROSS)	CAC7843
	75	Spring	CBH2654
	76	Spring	CBL1470
	77	Cushion	CNM8291
	78	Holder	CNV7405
	79	Keyboard Unit	CWM8713
	80	Connector(CN1901)	CKS4524
	81	Holder	CND1354
	82	Cushion	CNM6633
	83	Spacer	CNM7697
	84	Spacer	CNM7698
	85	Holder	CNV6910
	86	OEL Unit	MXS8045
	87	Grille Unit	CXB9854
	88	Button Unit(SRC/EQ)	CXB9924
	89	Button Unit(EQ-EX/BAND)	CXB9925
	90	Cover	XNS7014
	91	CD Mechanism Module(S10MP3)	CXK5662
	92	Screw	ISS26P055FTC
	93	Transistor(Q742,901,921)	2SD2375
	94	Choke Coil(L981)	CTH1280
	95	IC(IC301)	PAL007A
	96	Remote Control Unit	CXC1265
	97	Cover	CNS7068

2.4 CD MECHANISM MODULE



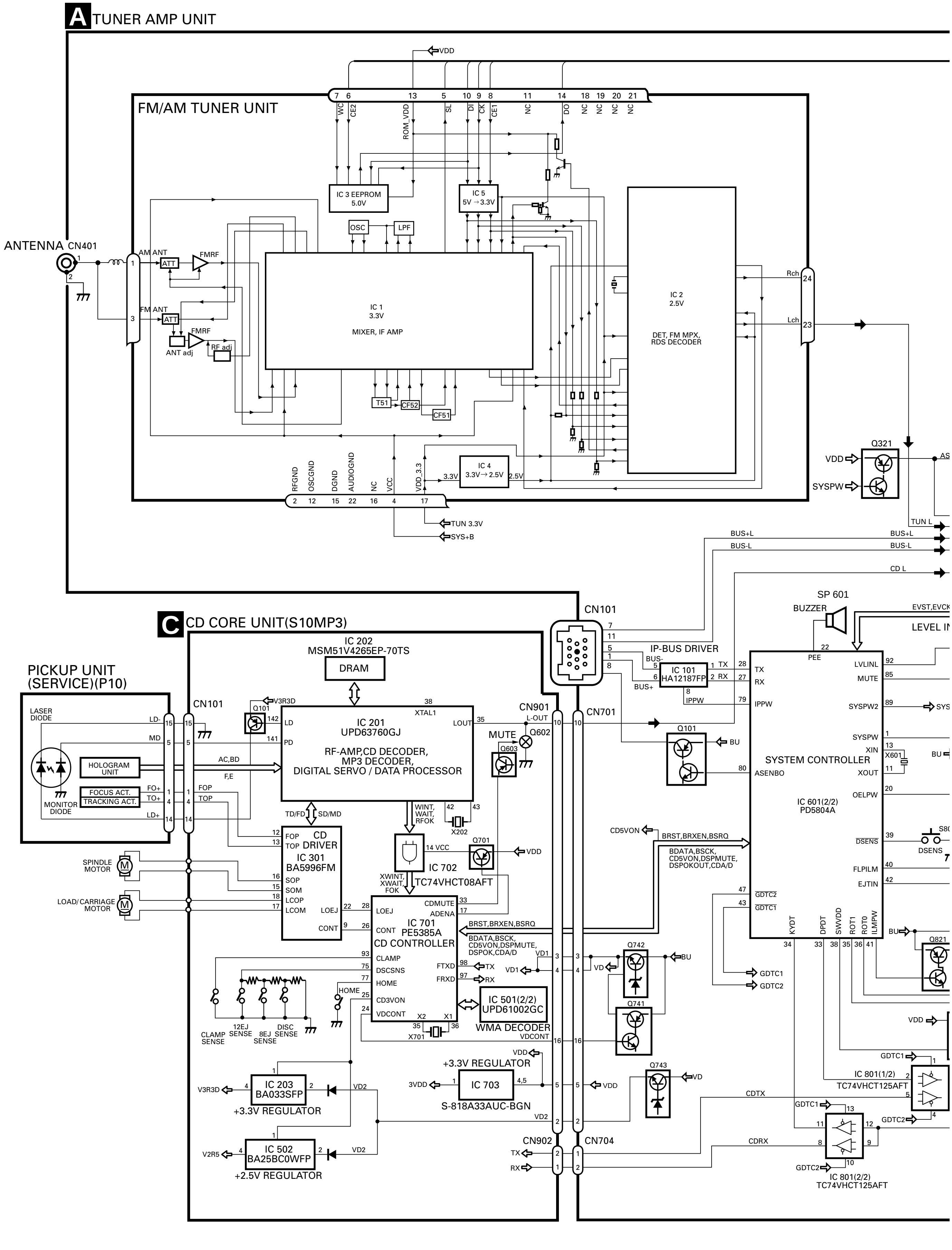
● CD MECHANISM MODULE SECTION PARTS LIST

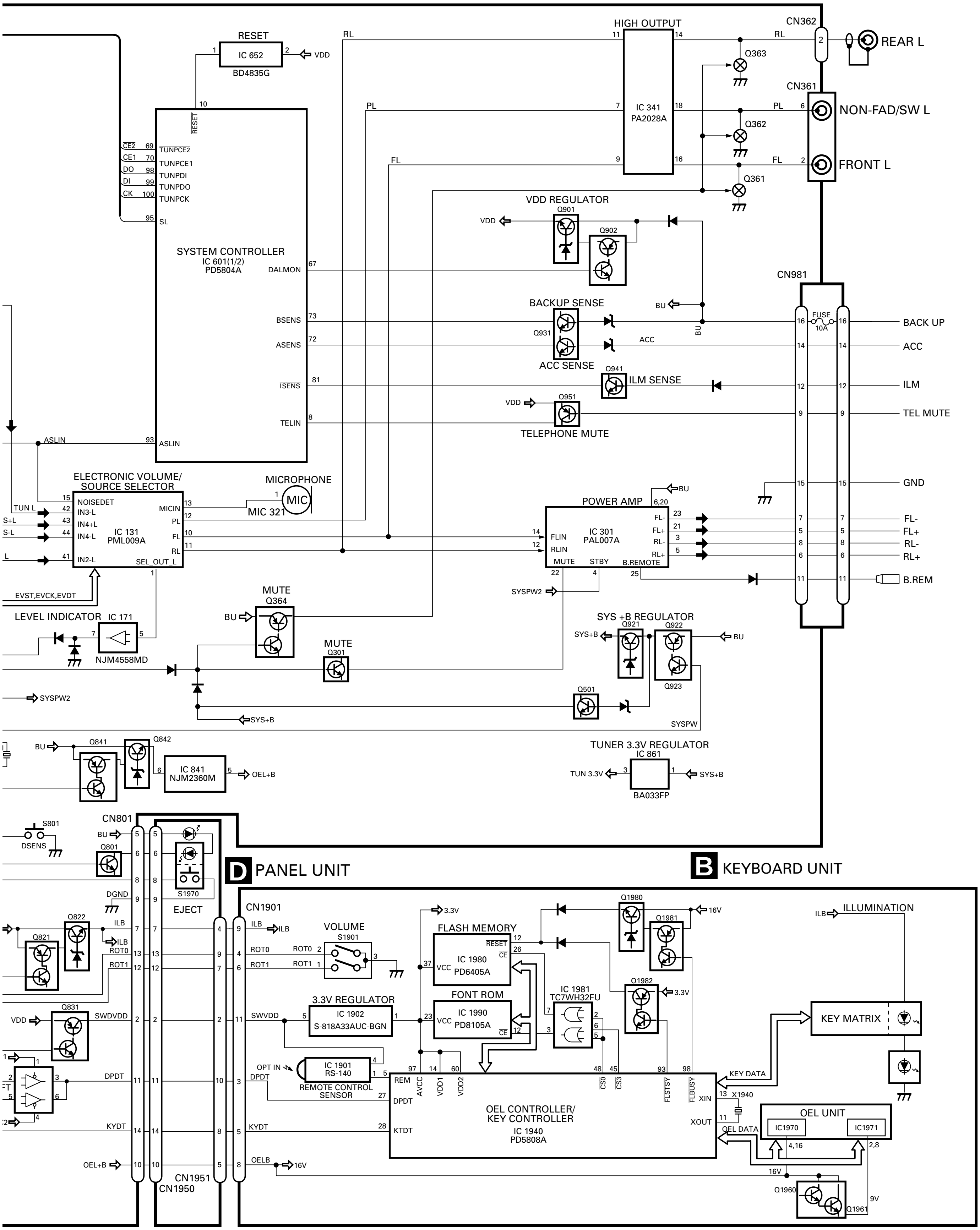
Mark	No.	Description	Part No.
	1	CD Core Unit(S10MP3)	CWX2792
	2	Connector(CN101)	CKS4182
	3	Connector(CN901)	CKS4017
	4	Screw	BMZ20P035FTC
	5	Screw	BSZ20P040FTC
	6	Screw(M2x4)	CBA1362
	7	Screw(M2x3)	CBA1511
	8	Screw(M2x3)	CBA1527
	9	Washer	CBF1037
	10	Washer	CBF1038
	11	Washer	CBF1060
	12	Spring	CBH2390
	13	Spring	CBH2606
	14	Spring	CBH2607
	15	Spring	CBH2608
	16	Spring	CBH2609
	17	Spring	CBH2610
	18	Spring	CBH2611
	19	Spring	CBH2612
	20	Spring	CBH2613
	21	Spring	CBH2614
	22	Spring	CBH2615
	23	Spring	CBH2616
	24	Spring	CBH2617
	25	Spring	CBH2620
	26	Spring	CBH2621
	27	Spring	CBH2641
	28	Spring	CBH2642
	29	Spring	CBH2643
	30	Spring	CBH2659
	31	Spring	CBH2688
	32	•••••	
	33	Shaft	CLA3845
	34	Frame	CNC9962
	35	Frame	CNC9963
	36	Bracket	CNC9966
	37	Bracket	CNC9967
	38	Arm	CNC9968
	39	Arm	CNC9973
	40	Lever	CNC9983
	41	Lever	CNC9984
	42	Sheet	CNM8134
	43	Collar	CNV6906
	44	Guide	CNV6925
	45	Arm	CNV7198

Mark	No.	Description	Part No.
	46	Rack	CNV7199
	47	Holder	CNV7201
	48	Holder	CNV7202
	49	Arm	CNV7203
	50	Gear	CNV7207
	51	Gear	CNV7208
	52	Gear	CNV7209
	53	Gear	CNV7210
	54	Gear	CNV7211
	55	Gear	CNV7212
	56	Rack	CNV7214
	57	Arm	CNV7215
	58	Arm	CNV7216
	59	Guide	CNV7217
	60	Roller	CNV7218
	61	Gear	CNV7219
	62	Arm	CNV7221
	63	Arm	CNV7220
	64	Arm	CNV7222
	65	Damper	CNV7313
	66	Damper	CNV7314
	67	Arm	CNV7341
	68	Arm	CNV7342
	69	Guide	CNV7360
	70	Guide	CNV7361
	71	Holder	CNV7437
	72	Arm	CNV7444
	73	Gear	CNV7595
	74	Damper	CNV7618
	75	Motor Unit(M1)	CXB6007
	76	Chassis Unit	CXB8728
	77	Screw Unit	CXB8729
	78	Gear Unit	CXB8731
	79	Arm Unit	CXB8732
	80	Arm Unit	CXB8735
	81	Arm Unit	CXB8852
	82	Motor Unit(M2)	CXB8933
	83	Bracket	CNC9985
	84	•••••	
	85	Screw(M2x5)	EBA1028
	86	Screw	JFZ20P020FTC
	87	Screw	JGZ17P022FTC
	88	Washer	YE15FTC
	89	Washer	YE20FTC
	90	Pickup Unit(Service)(P10)	CXX1641
	91	Screw	IMS26P030FTC
	92	Connector(CN902)	CKS2191

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

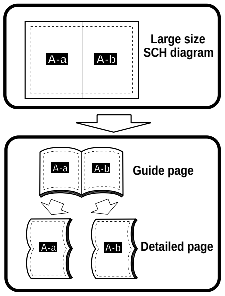




RESET
IC 652
BD4835G
VDD
HIGH OUTPUT
IC 341
PA2028A
CN362
REAR L
CN361
NON-FAD/SW L
FRONT L
Q363
Q362
Q361
SYSTEM CONTROLLER
IC 601(1/2)
PD5804A
TUNPCE2
TUNPCE1
TUNPDI
TUNPDO
TUNPCK
SL
DALMON
BSENS
ASENS
ISENS
TELIN
ASLIN
VDD REGULATOR
Q901
Q902
BACKUP SENSE
Q931
ACC SENSE
Q941
ILM SENSE
Q951
TELEPHONE MUTE
CN981
FUSE
10A
BACK UP
ACC
ILM
TEL MUTE
GND
FL-
FL+
RL-
RL+
B.REM
ELECTRONIC VOLUME/
SOURCE SELECTOR
IC 131
PML009A
NOISEDET
IN3-L
IN4+L
IN4-L
IN2-L
MICIN
SEL_OUT_L
MICROPHONE
MIC
MIC 321
POWER AMP
IC 301
PAL007A
FLIN
RLIN
MUTE
STBY
B.REMOTE
SYSPW2
EVST,EVCK,EVDT
LEVEL INDICATOR
IC 171
NJM4558MD
MUTE
Q364
Q301
SYS +B REGULATOR
Q921
Q922
Q923
Q501
SYS+B
SYSPW
BU
Q841
Q842
IC 841
NJM2360M
OEL+B
TUNER 3.3V REGULATOR
IC 861
BA033FP
TUN 3.3V
CN801
S801
DSENS
Q801
DGND
S1970
EJECT
Q822
Q821
ILB
ROT0
ROT1
Q831
SWDVDD
DPDT
KYDT
CN1951
CN1950
D PANEL UNIT
B KEYBOARD UNIT
CN1901
VOLUME
S1901
3.3V REGULATOR
IC 1902
S-818A33AUC-BGN
OPT IN
IC 1901
RS-140
REMOTE CONTROL
SENSOR
FLASH MEMORY
IC 1980
PD6405A
FONT ROM
IC 1990
PD8105A
IC 1981
TC7WH32FU
Q1980
Q1981
Q1982
16V
3.3V
ILLUMINATION
KEY MATRIX
KEY DATA
OEL CONTROLLER/
KEY CONTROLLER
IC 1940
PD5808A
REM
DPDT
KTDT
XIN
XOUT
X1940
OEL DATA
OEL UNIT
IC1970
IC1971
OELB
Q1960
Q1961
9V

3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



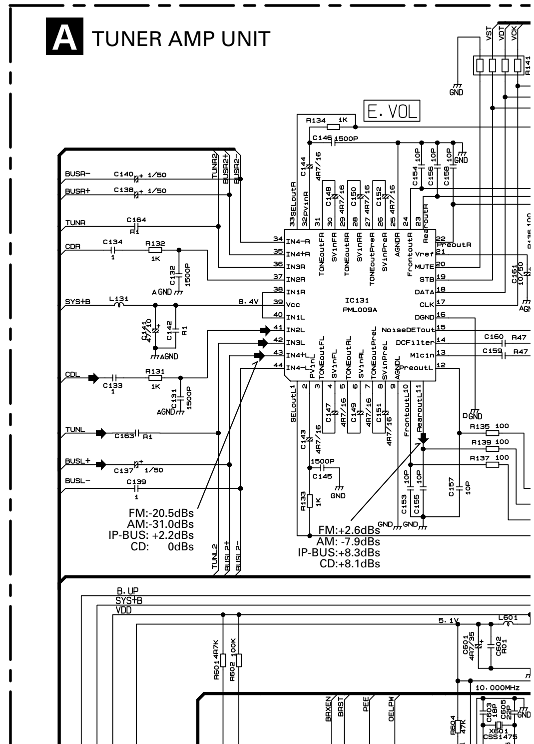
A-a

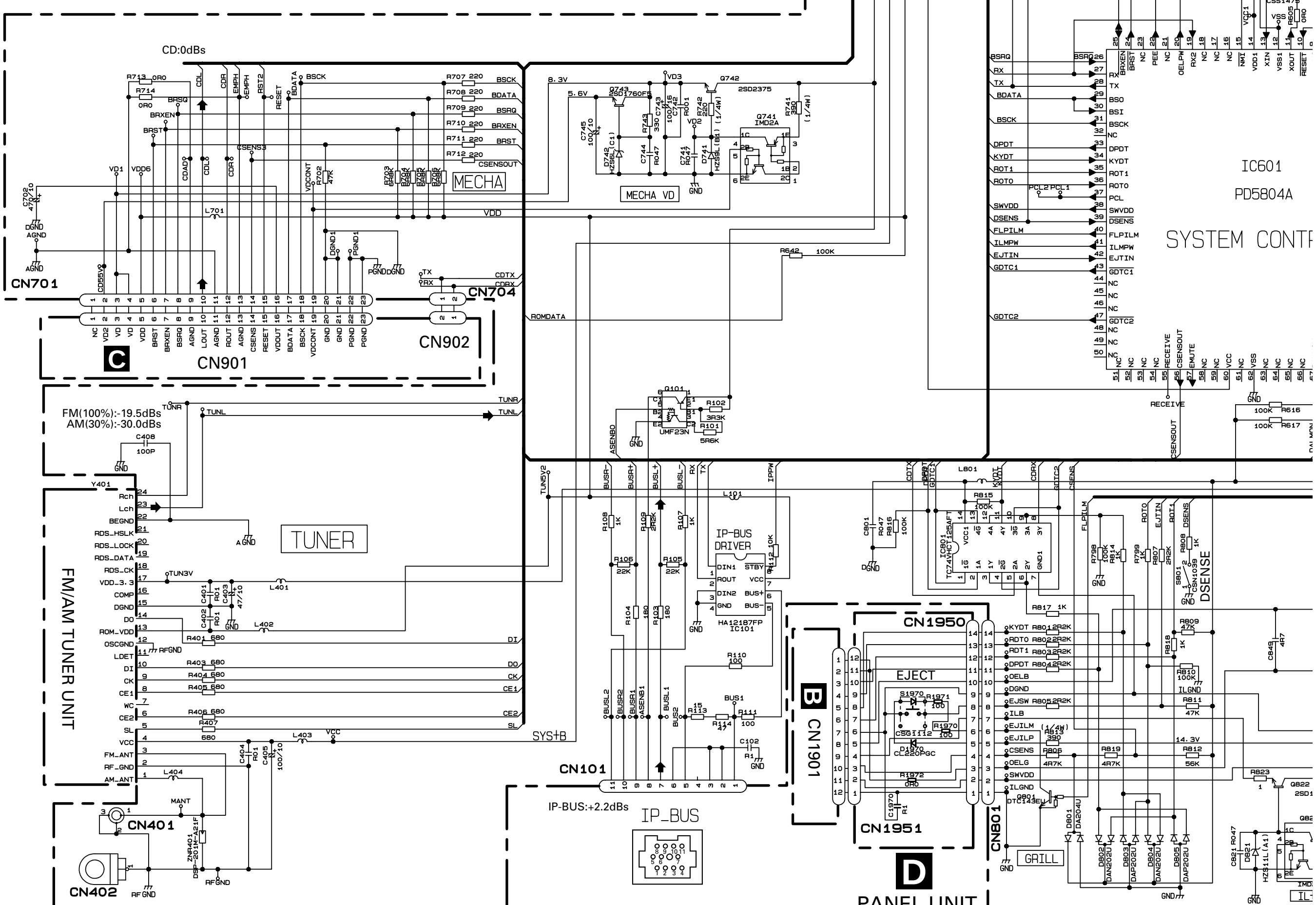
NOTE :

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

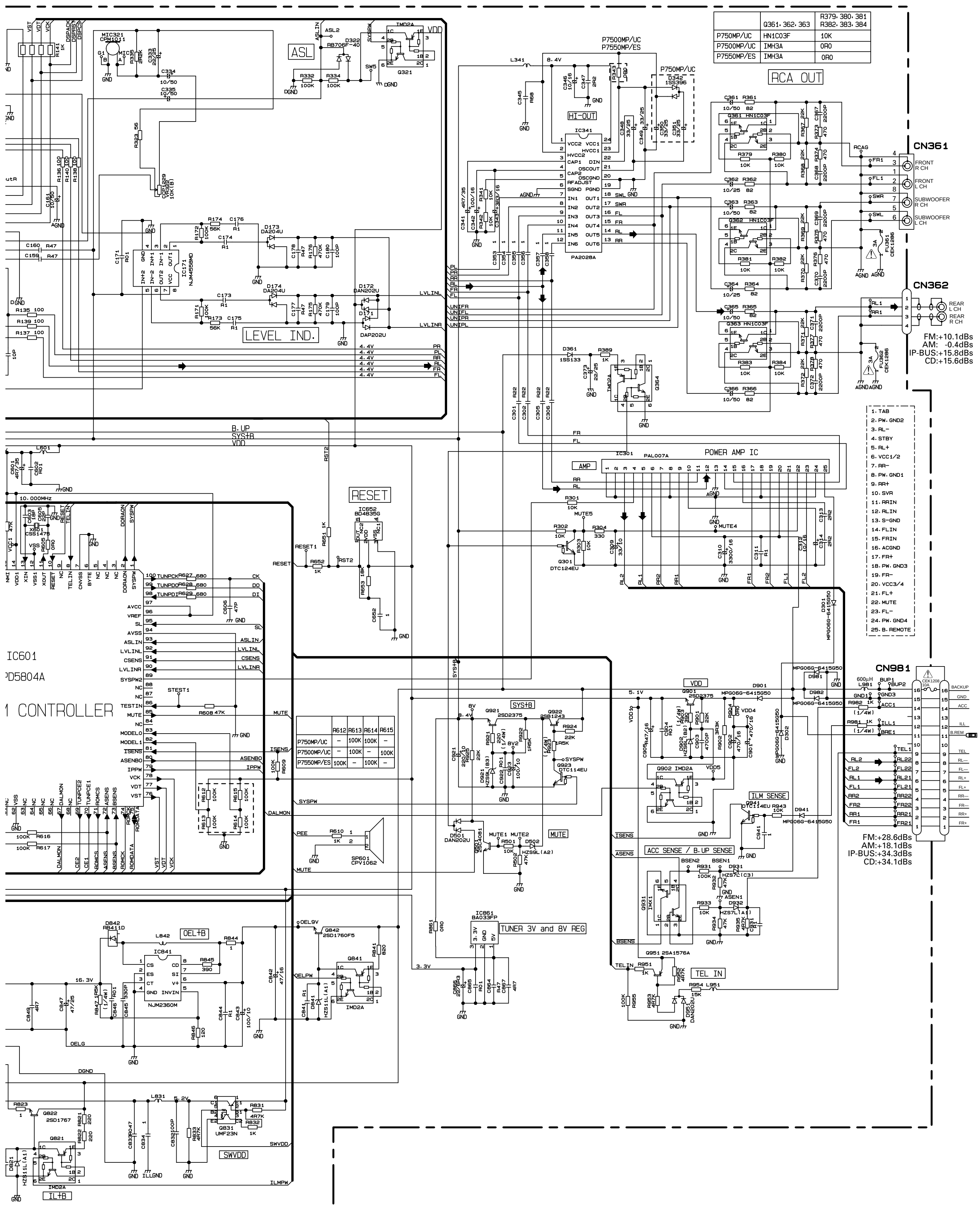
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.





A-b

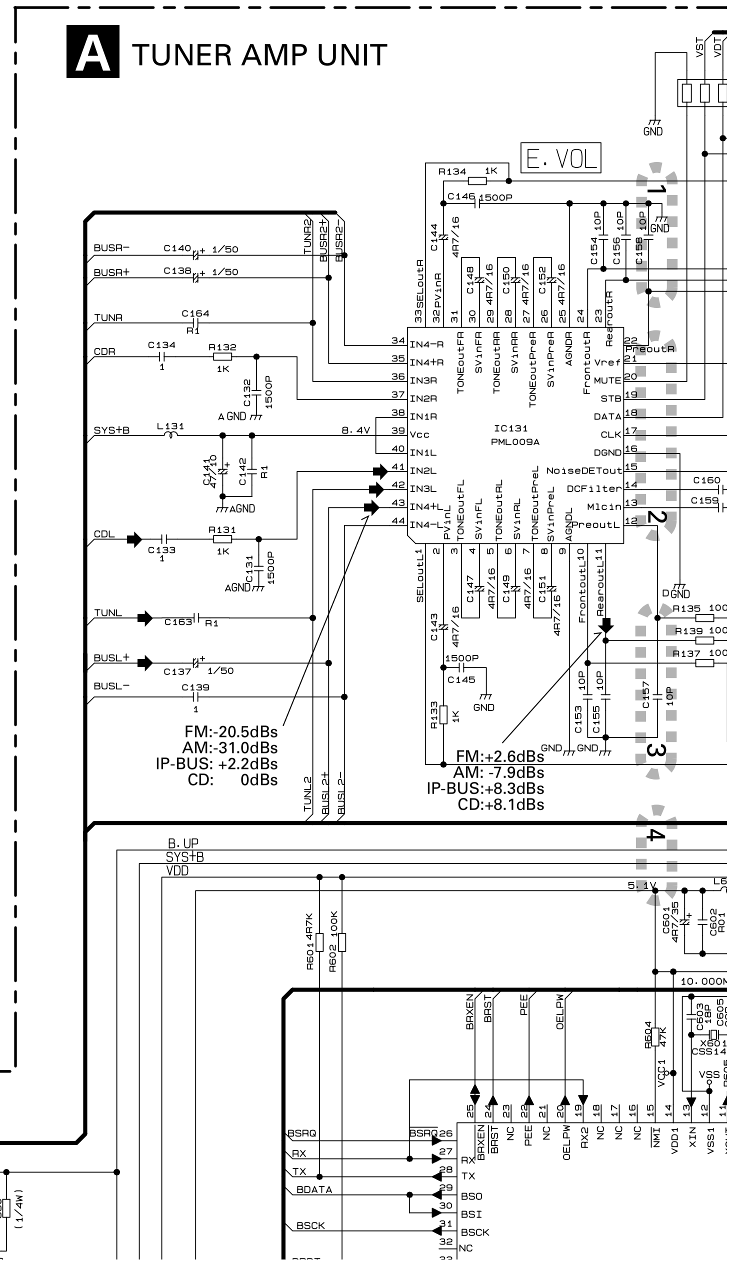


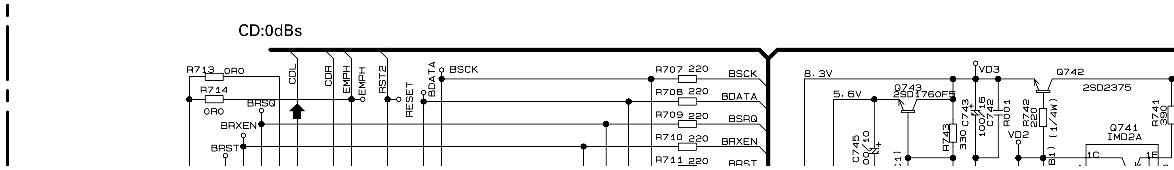
	Q361, 362, 363	R379, 380, 381 R382, 383, 384
P750MP/UC	HN1C03F	10K
P7500MP/UC	IMH3A	0R0
P7550MP/ES	IMH3A	0R0

	R612	R613	R614	R615
P750MP/UC	–	100K	100K	–
P7500MP/UC	–	100K	–	100K
P7550MP/ES	100K	–	100K	–

A

A TUNER AMP UNIT

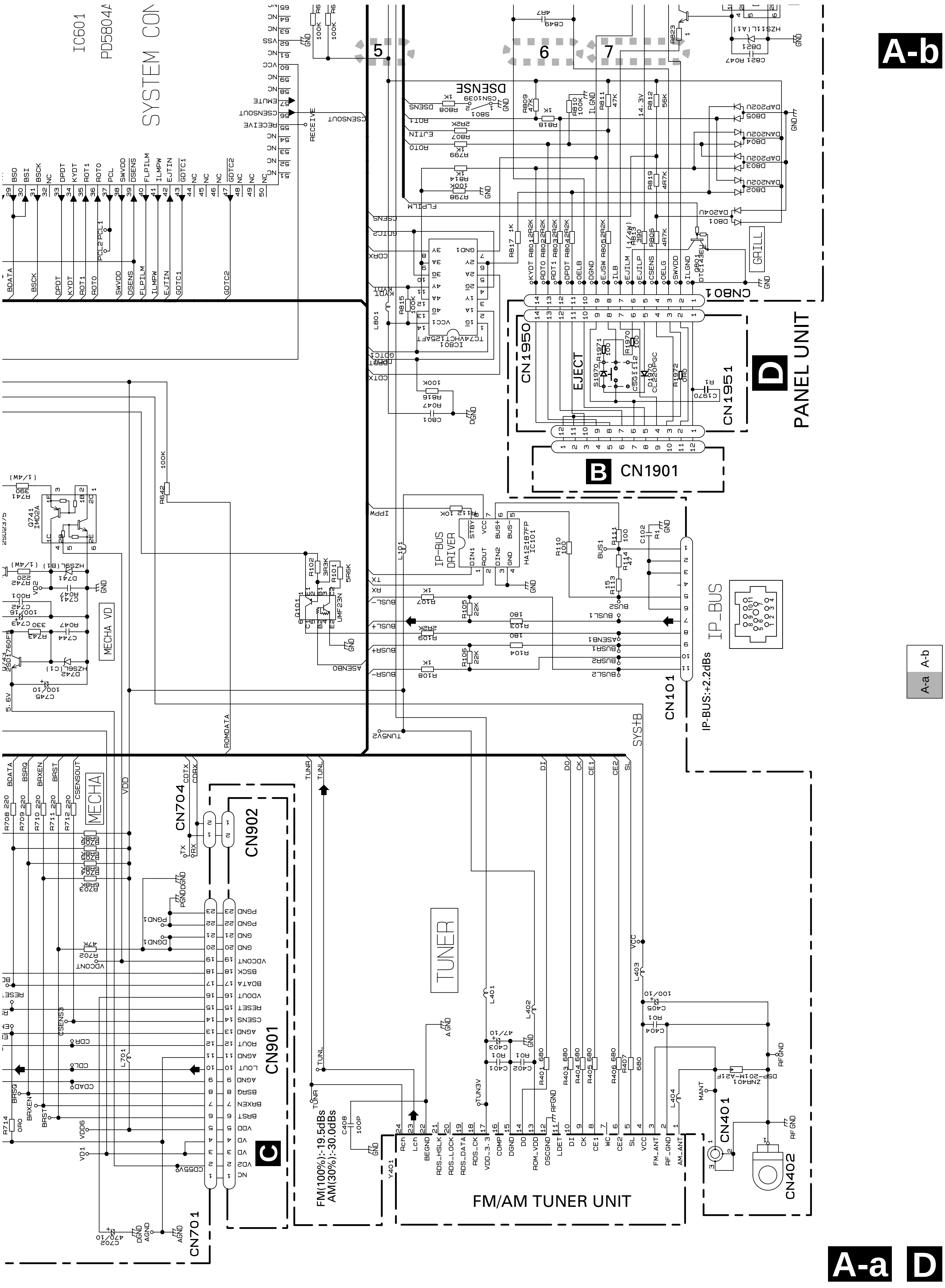




NOTE :
- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2 → 2R2
0.022 → R022


A-b
A-a
D
PANEL UNIT
CN1901
CN1950
CN1951
CN801
EJECT
GRILL
IP-BUS DRIVER
IP_BUS
IP-BUS:+2.2dBs
CN101
IC601
PD5804A
SYSTEM CON
MECHA VD
MECHA
CN704
CN902
CN901
CN701
TUNER
FM/AM TUNER UNIT
FM(100%):-19.5dBs
AM(30%):-30.0dBs
CN401
CN402
SYS+B

1 2 3 4

A

B

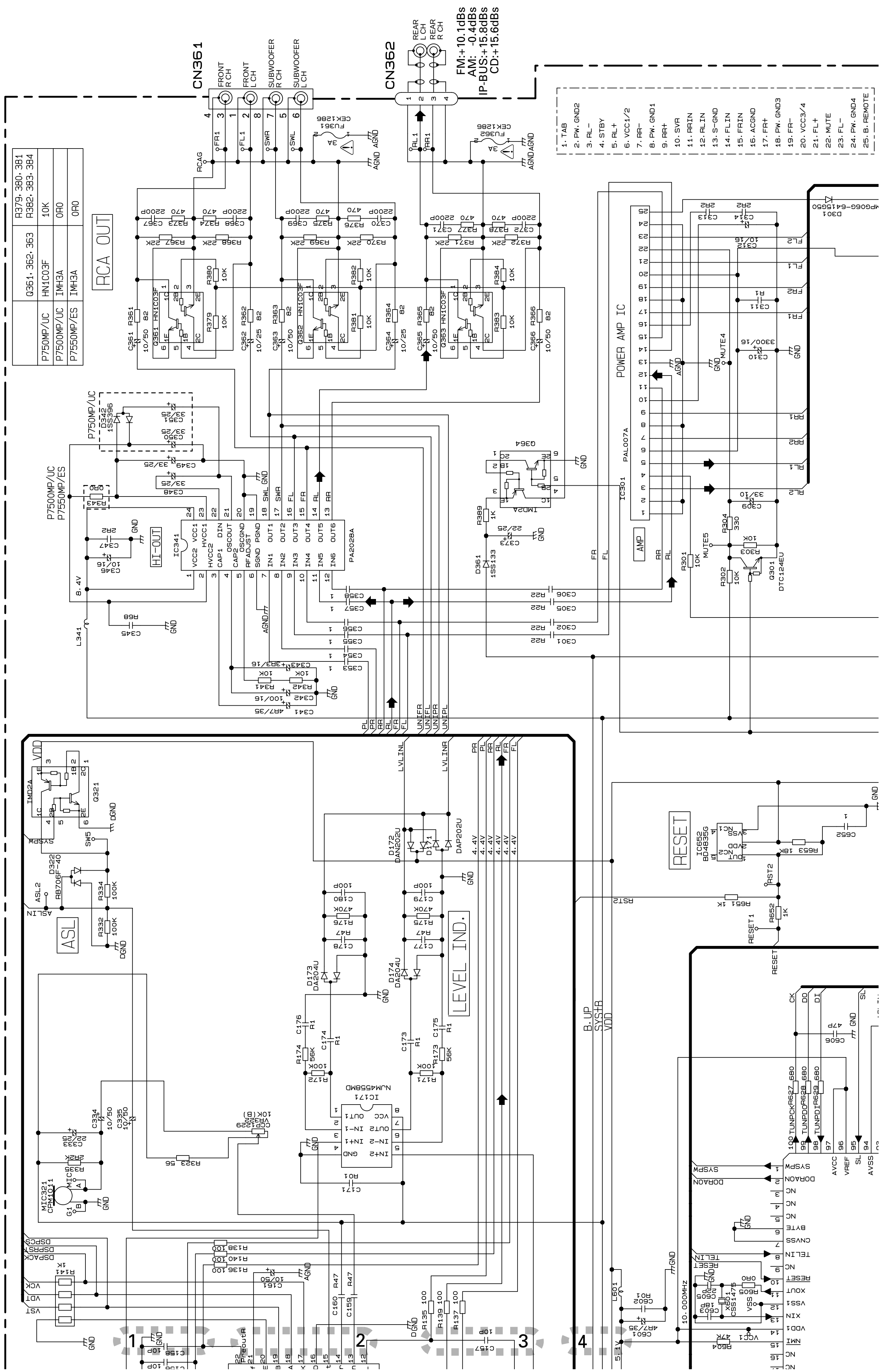
C

D

E

F

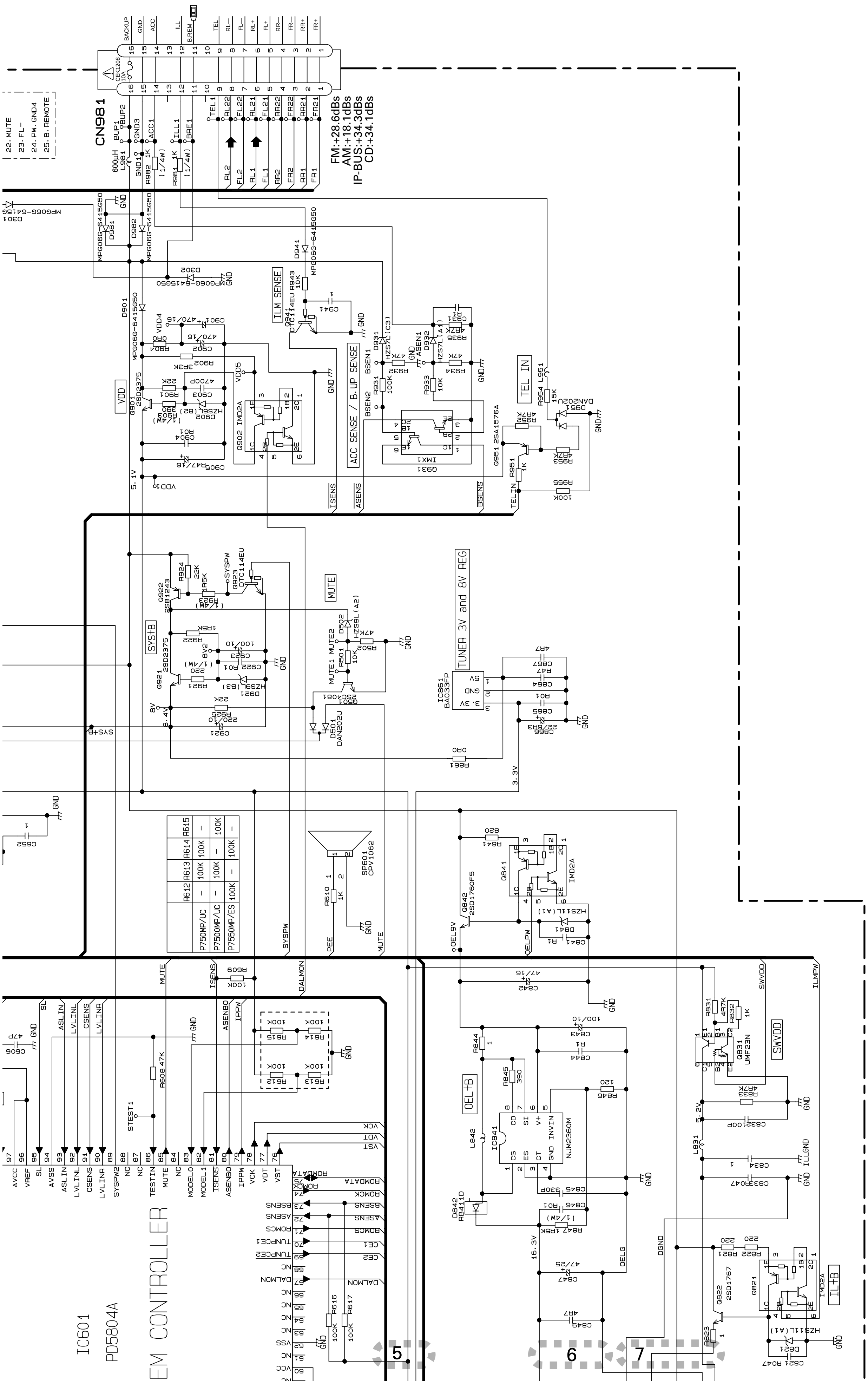
A-a A-b



A-b

1 2 3 4

A B C D E F

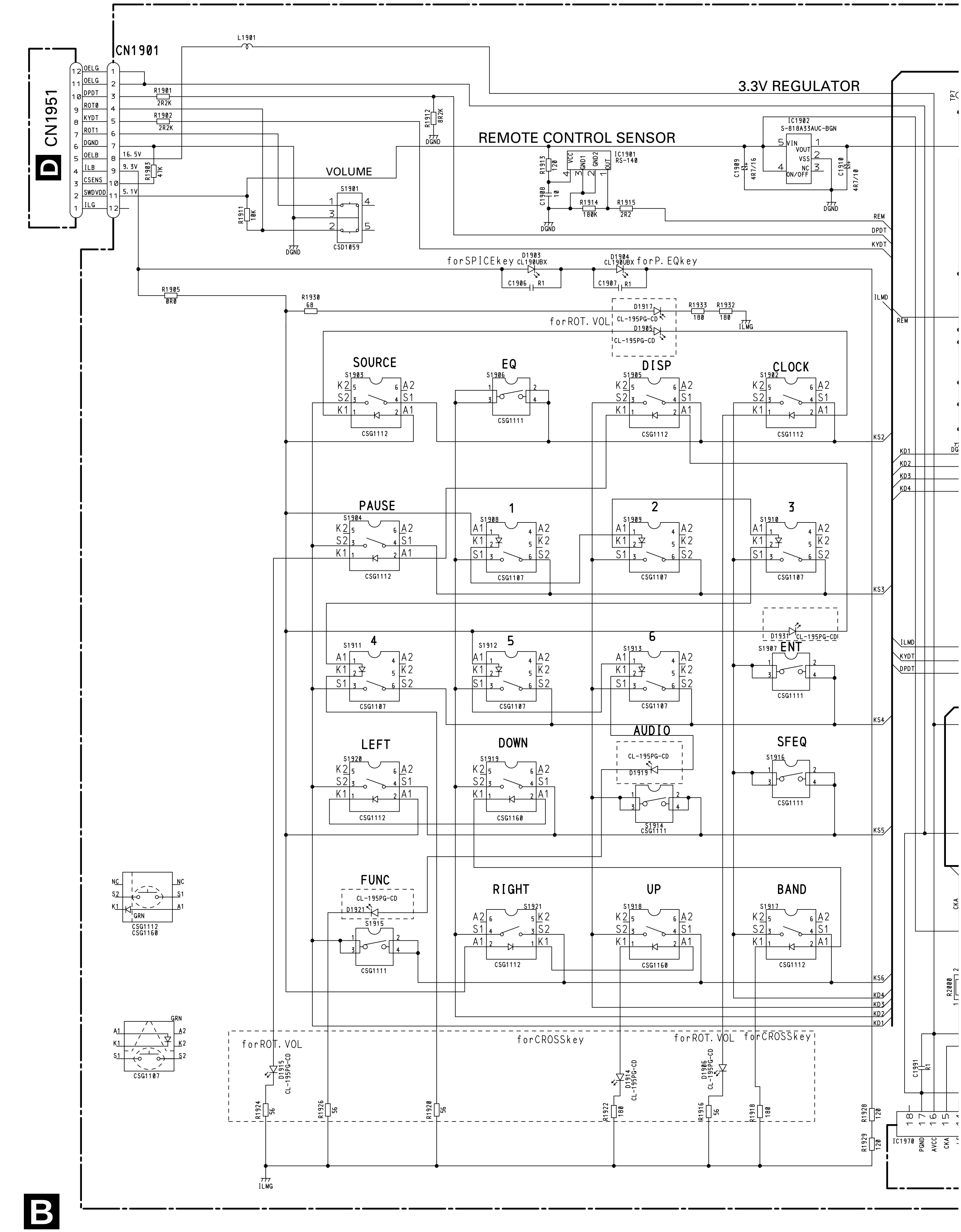


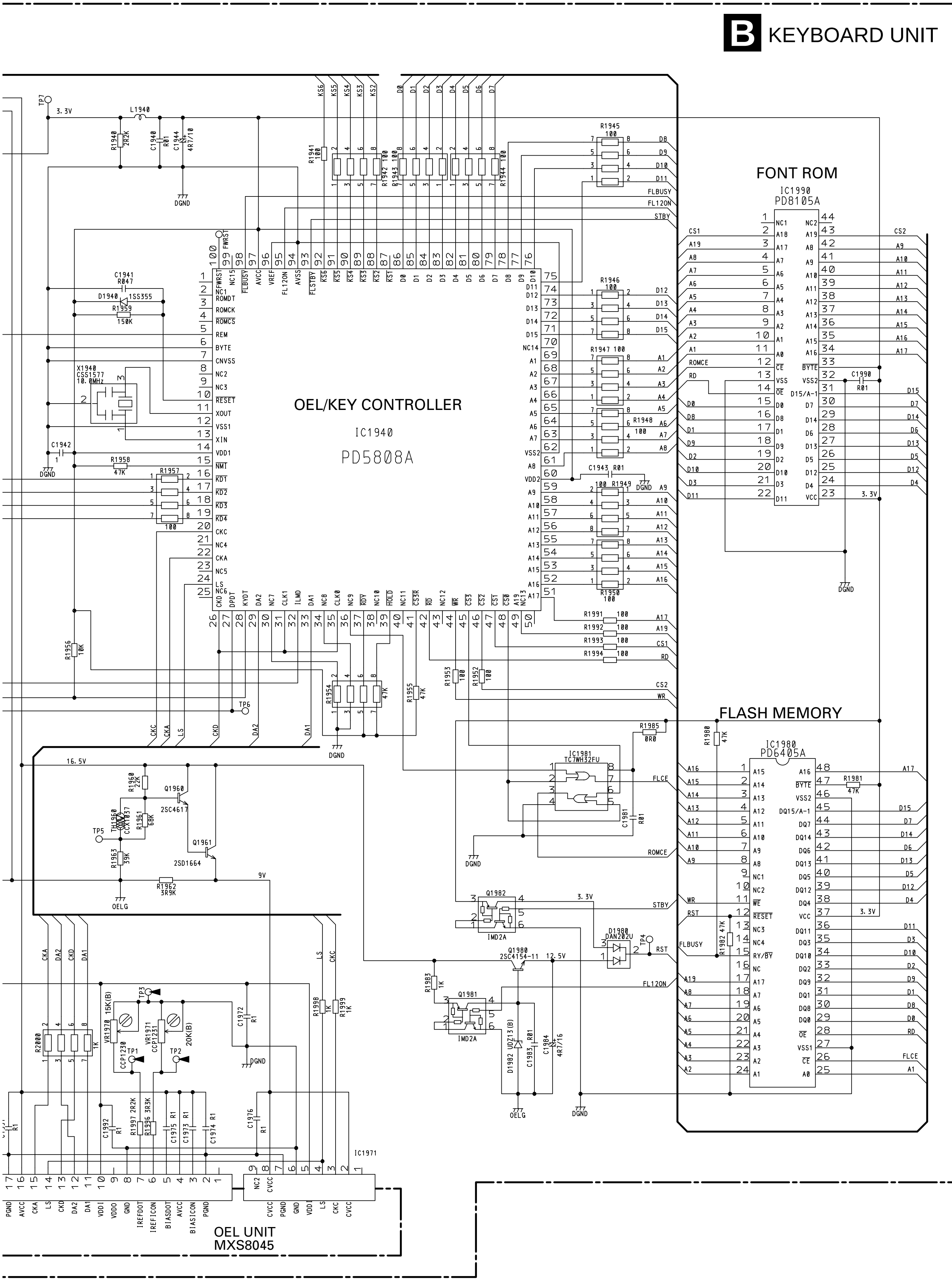
	R612	R613	R614	R615
P750MP/UC	–	100K	100K	–
P7500MP/UC	–	100K	–	100K
P7550MP/ES	100K	–	100K	–

A-a A-b

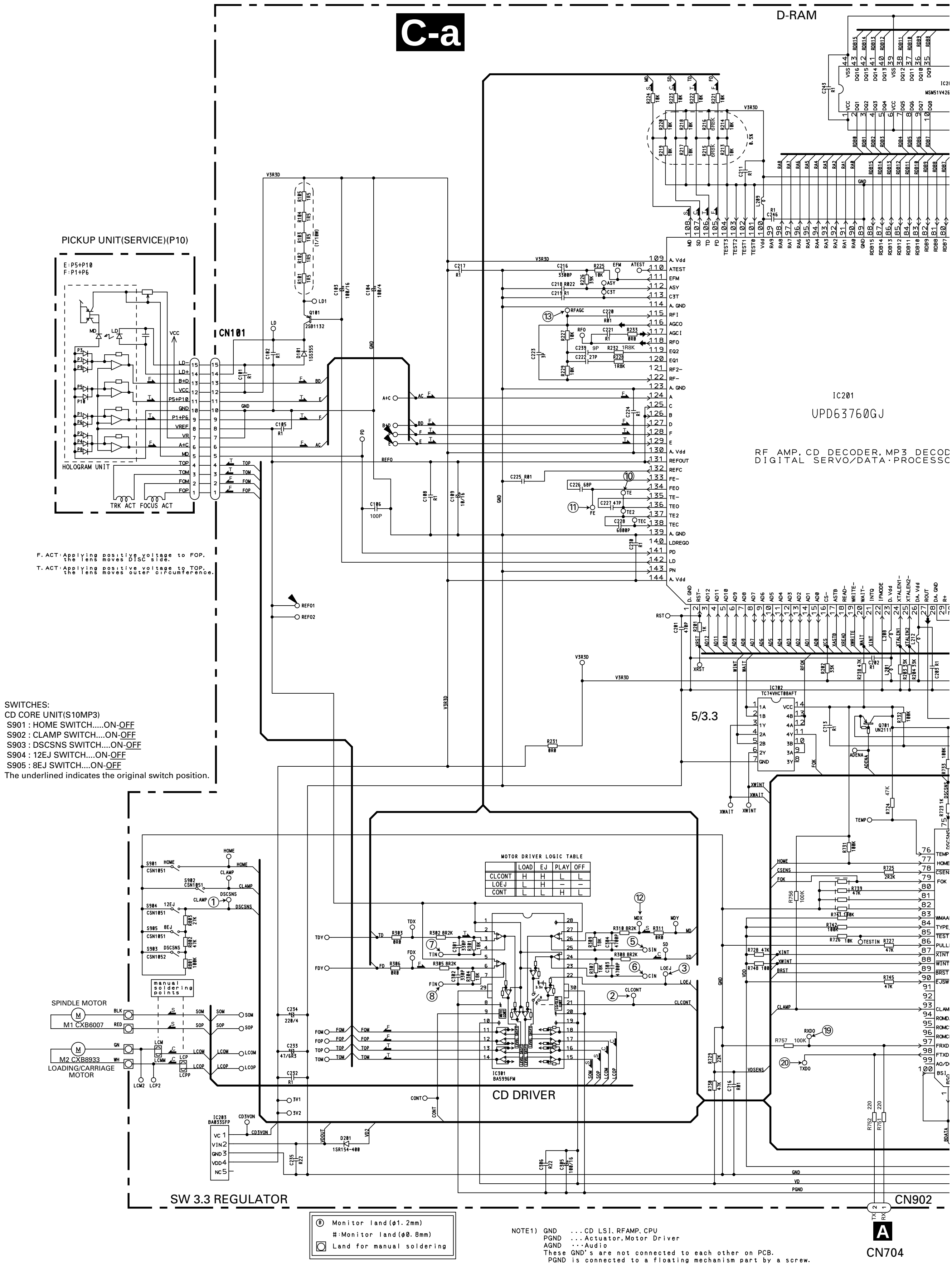
A-b

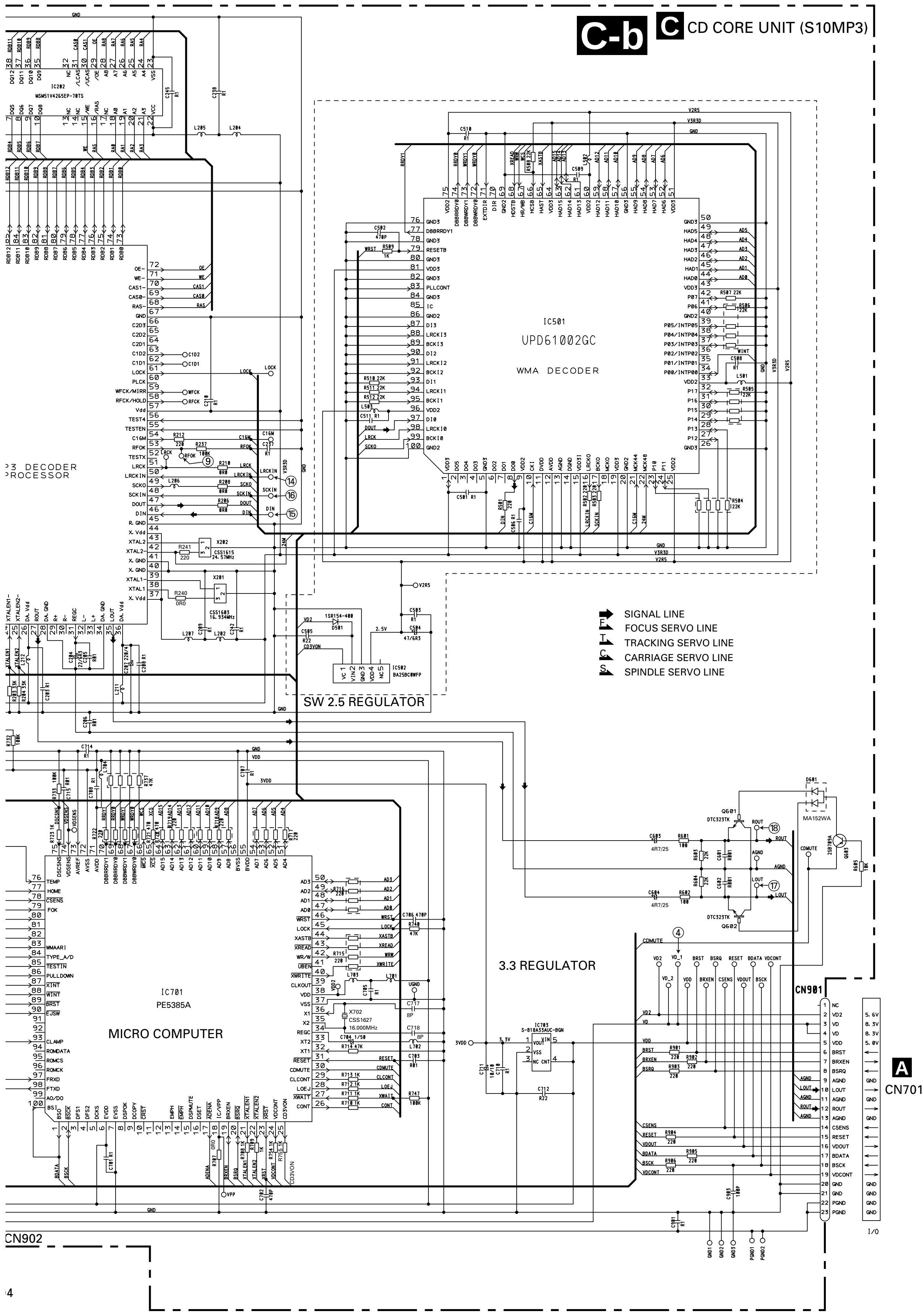
3.3 KEYBOARD UNIT




B KEYBOARD UNIT
FONT ROM
IC1990
PD8105A
OEL/KEY CONTROLLER
IC1940
PD5808A
FLASH MEMORY
IC1980
PD6405A
IC1981
TC7WH32FU
OEL UNIT
MXS8045
IC1971

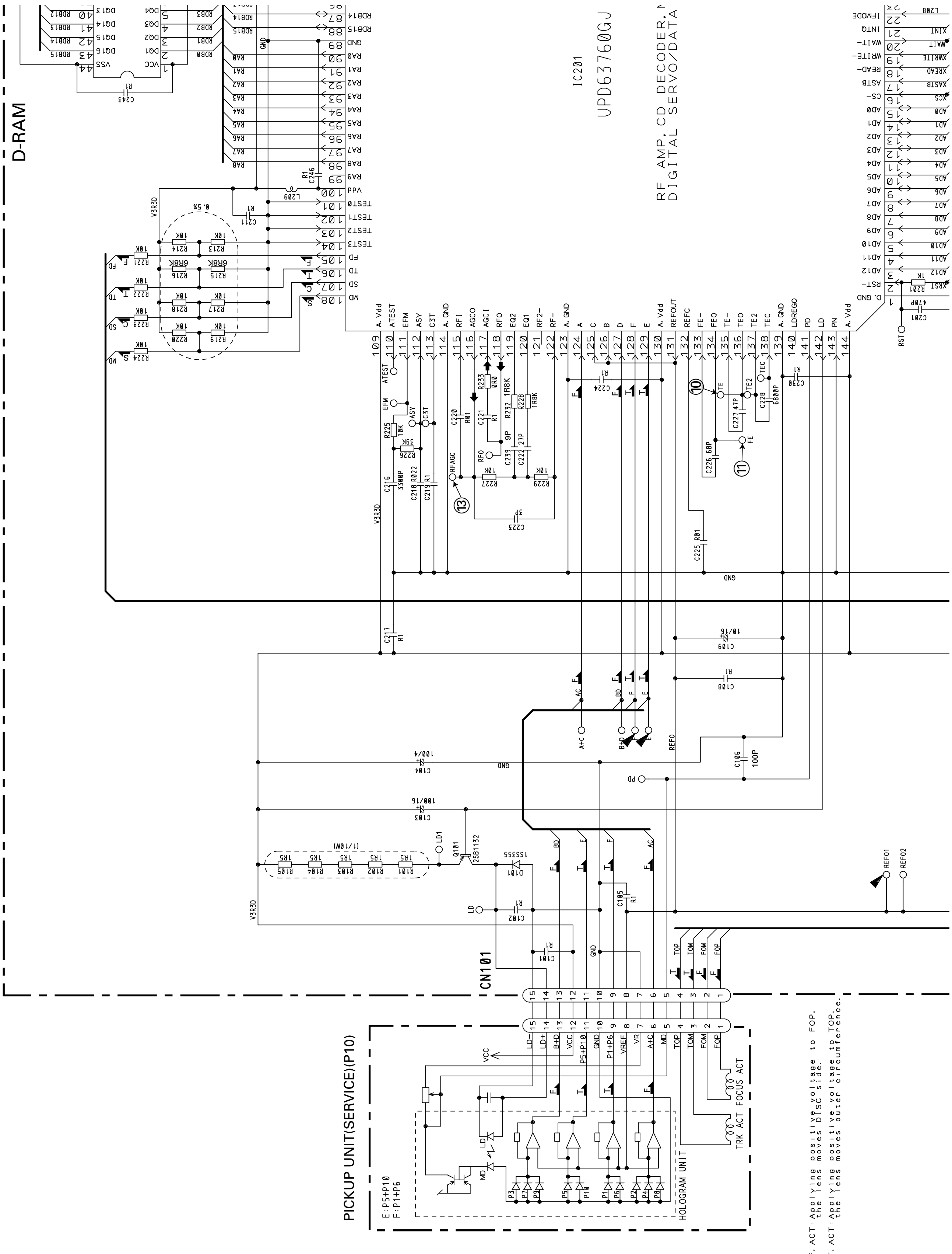
3.4 CD MECHANISM MODULE(GUIDE PAGE)




C-b
C CD CORE UNIT (S10MP3)
IC501
UPD61002GC
WMA DECODER
IC202
MSM51V4265EP-70TS
MP3 DECODER PROCESSOR
SIGNAL LINE
FOCUS SERVO LINE
TRACKING SERVO LINE
CARRIAGE SERVO LINE
SPINDLE SERVO LINE
IC502
BA25BC0WFP
SW 2.5 REGULATOR
IC701
PE5385A
MICRO COMPUTER
3.3 REGULATOR
IC703
S-81833AUC-BGN
X702
CSS1627
16.000MHz
X201
CSS1603
16.934MHz
X202
CSS1615
24.57MHz
D601
MA152WA
Q601
DTC323TK
Q602
DTC323TK
Q603
2SB709A
CN901
CN902
A
CN701

C-b

A B C D E F



C-b
C-a

C-a

A

B

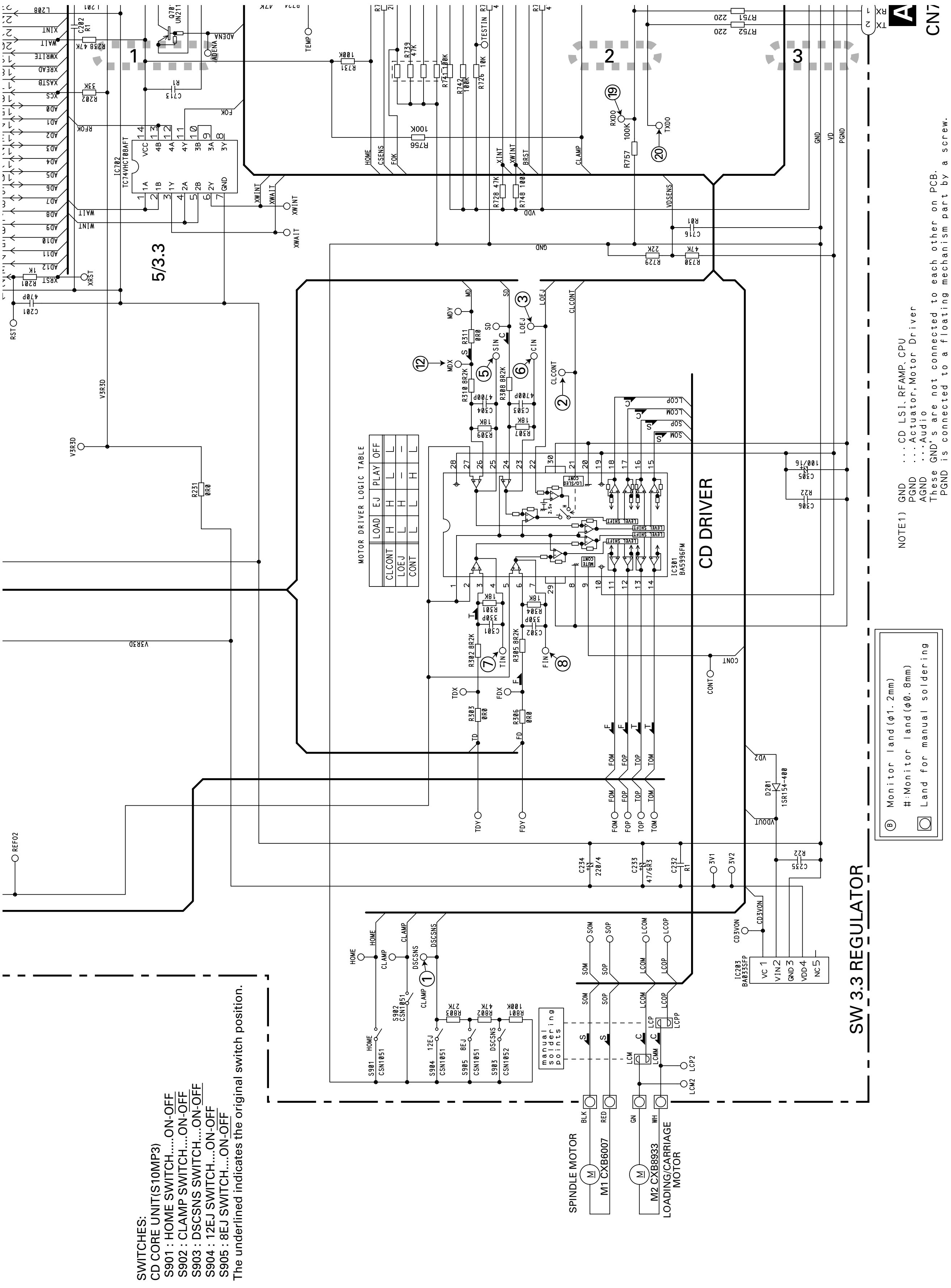
C

D

E

F

C-b



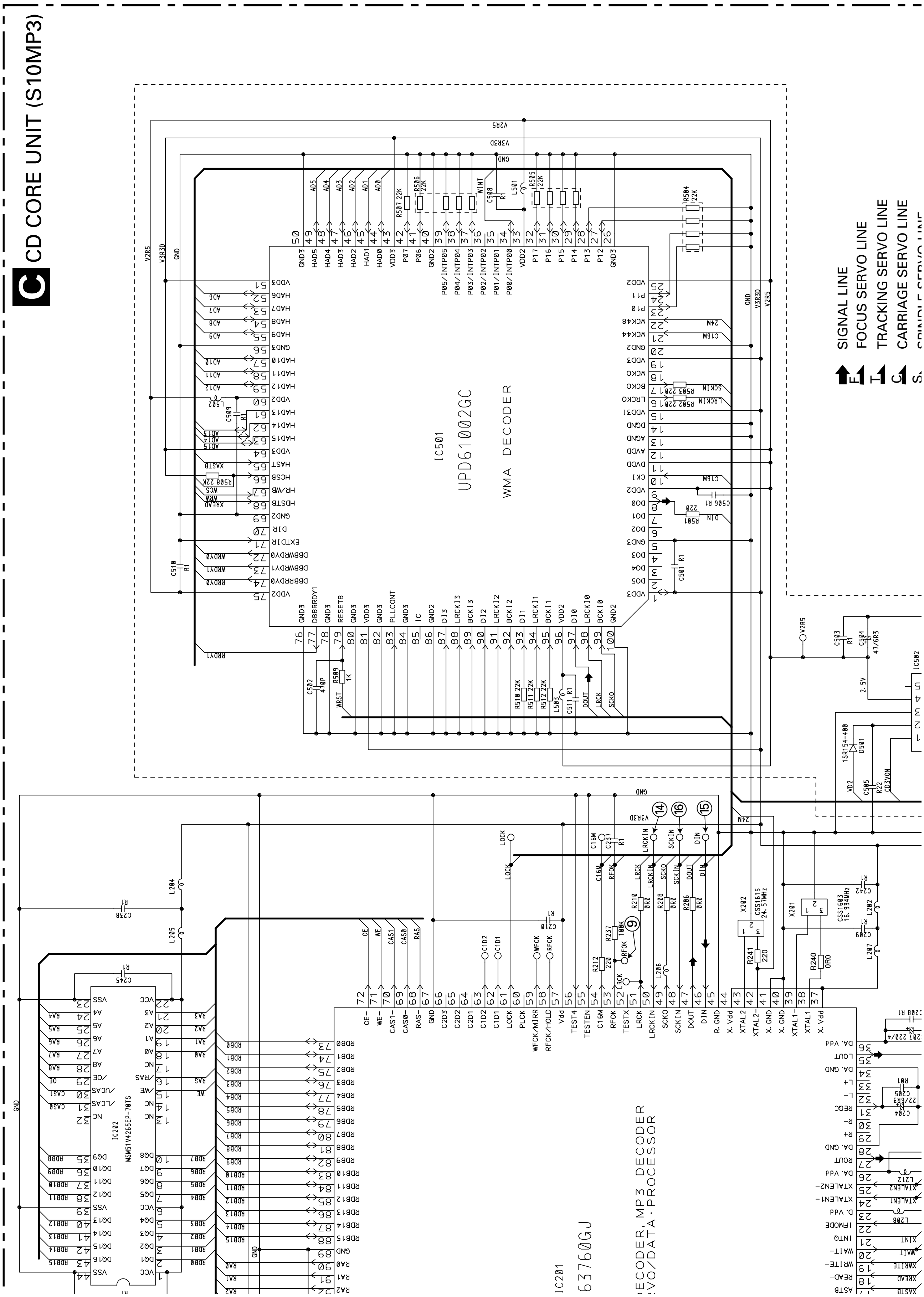
C-a C-b

C-a

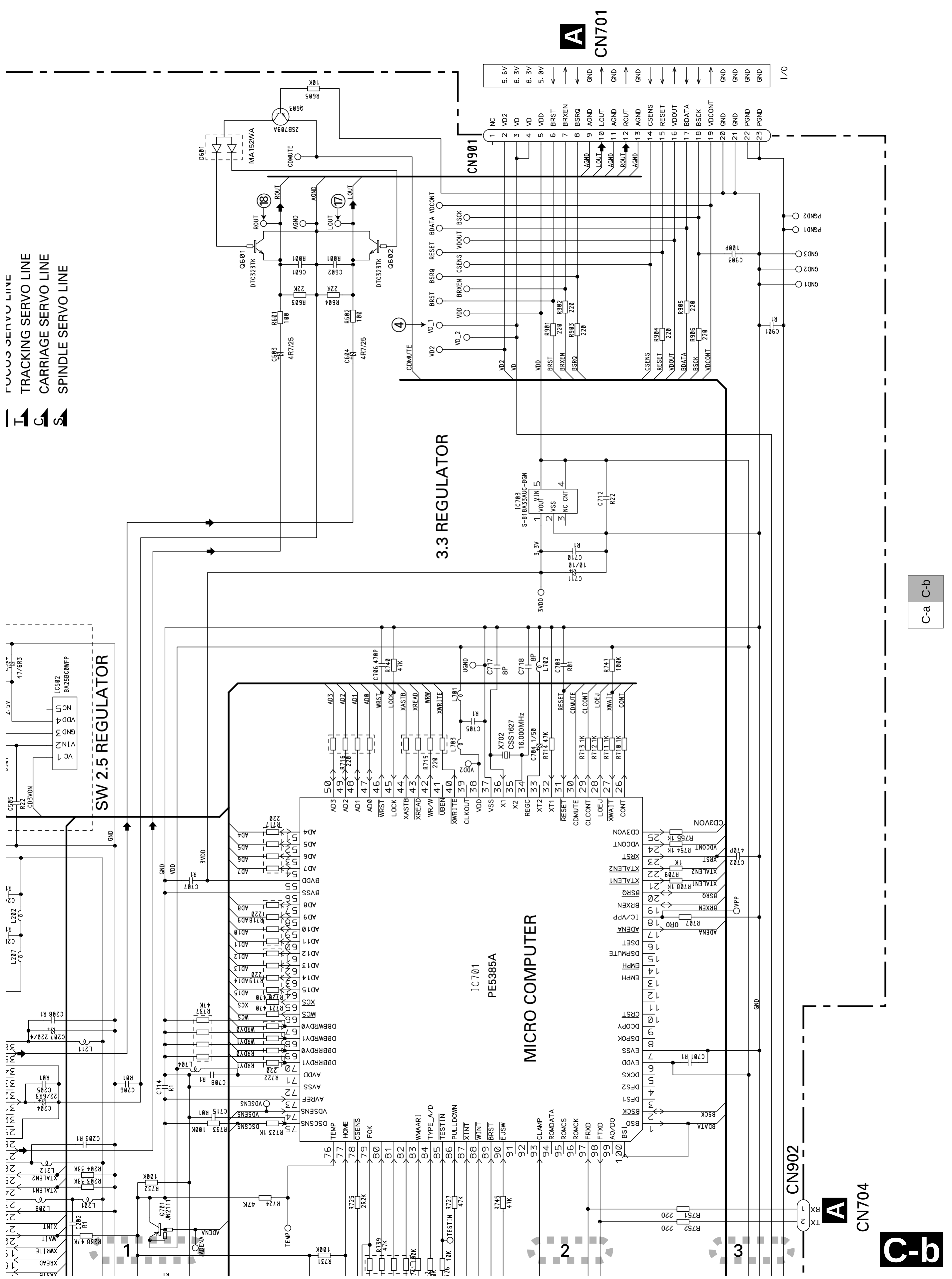
1 2 3 4

A B C D E F

C-a C-b



C-b


CN701
CN901
3.3 REGULATOR
SW 2.5 REGULATOR
MICRO COMPUTER
IC701
PE5385A
FOCUS SERVO LINE
TRACKING SERVO LINE
CARRIAGE SERVO LINE
SPINDLE SERVO LINE
CN902
CN704
C-b

● Waveforms

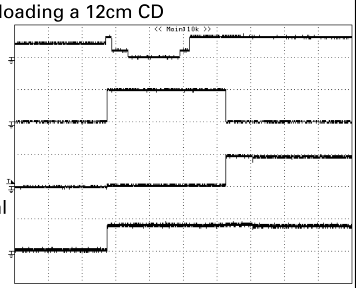
Note : 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage REFO1(1.65V)

① DSCSNS 5V/div 500ms/div
② CLCONT 5V/div
③ LOEJ 5V/div
④ VD 10V/div

When loading a 12cm CD

Ref.: GND

Mode: Normal

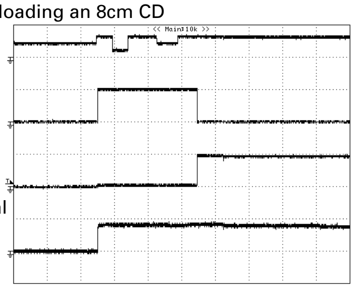


① DSCSNS 5V/div 500ms/div
② CLCONT 5V/div
③ LOEJ 5V/div
④ VD 10V/div

When loading an 8cm CD

Ref.: GND

Mode: Normal

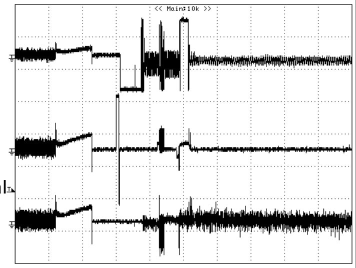


⑤ SIN 1V/div 2s/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When setting up after loading a 12cm CD-DA disc

Ref.: REFO

Mode: Normal

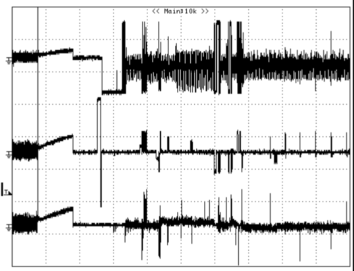


⑤ SIN 1V/div 2s/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When setting up after loading a 12cm CD-ROM disc(1 session)

Ref.: REFO

Mode: Normal

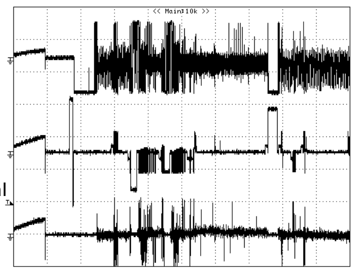


⑤ SIN 1V/div 2s/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When setting up after loading a 12cm CD-ROM disc(3 session)

Ref.: REFO

Mode: Normal

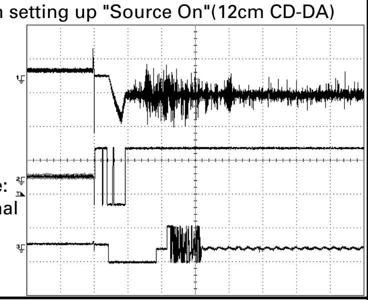


⑧ FIN 200mV/div 500ms/div
⑨ RFOK 2V/div
⑤ SIN 2V/div

When setting up "Source On"(12cm CD-DA)

Ref.: REFO

Mode: Normal

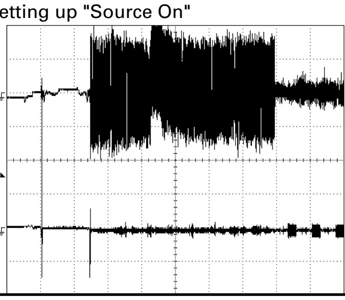


⑩ TE 500mV/div 200ms/div
⑪ FE 500mV/div

When setting up "Source On"

Ref.: REFO

Mode: Normal

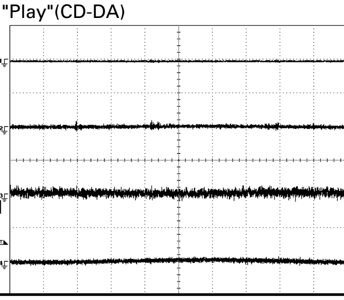


⑪ FE 500mV/div 20ms/div
⑧ FIN 500mV/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

During "Play"(CD-DA)

Ref.: REFO

Mode: Normal

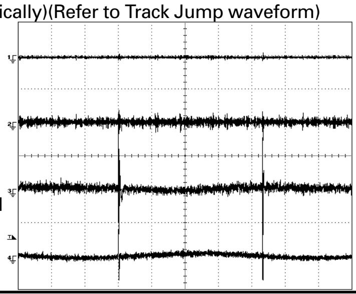


⑪ FE 500mV/div 20ms/div
⑧ FIN 500mV/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

During "Play"(CD-ROM)(Track Jump is generated periodically)(Refer to Track Jump waveform)

Ref.: REFO

Mode: Normal

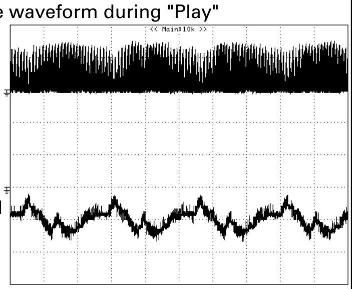


⑫ MDX 500mV/div 50ms/div
⑤ SIN 200mV/div

Spindle waveform during "Play"

Ref.: REFO

Mode: Normal

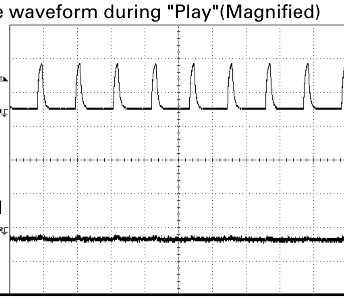


⑫ MDX 500mV/div 5µs/div
⑤ SIN 1V/div

Spindle waveform during "Play"(Magnified)

Ref.: REFO

Mode: Normal

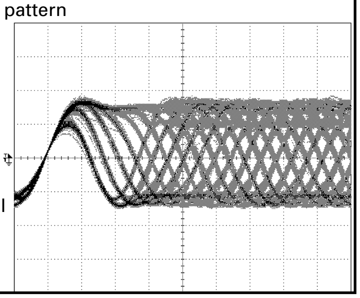


⑬ RFAGC 500mV/div 5µs/div

RF eye pattern

Ref.: REFO

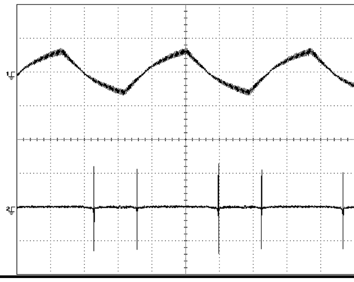
Mode: Normal



⑧ FIN 500mV/div 200ms/div
⑪ FE 500mV/div

Focus Search

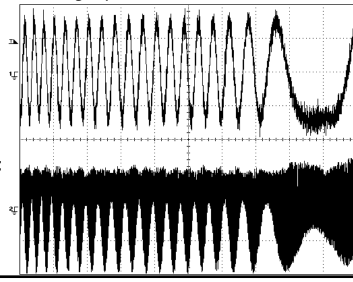
Ref.: REFO
Mode: TEST



⑩ TE 500mV/div 2ms/div
⑬ RFAGC 500mV/div

When "Tracking Open"

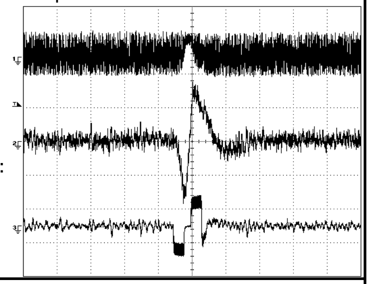
Ref.: REFO
Mode: TEST



⑬ RFAGC 1V/div 500µs/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

1 Track Jump

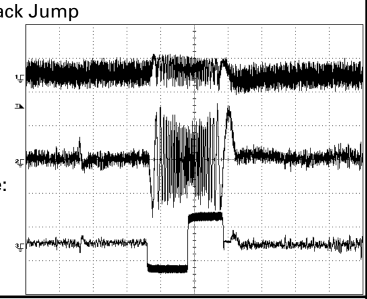
Ref.: REFO
Mode: TEST



⑬ RFAGC 1V/div 1ms/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

32 Track Jump

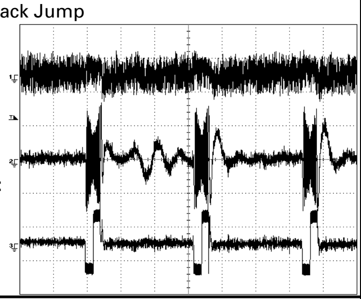
Ref.: REFO
Mode: TEST



⑬ RFAGC 1V/div 5ms/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

100 Track Jump

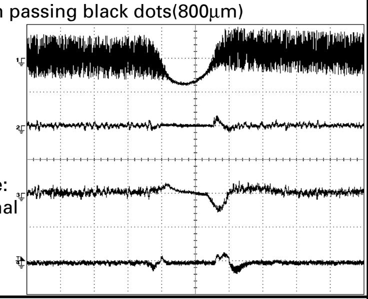
Ref.: REFO
Mode: TEST



⑬ RFAGC 1V/div 500µs/div
⑦ TIN 1V/div
⑩ TE 1V/div
⑧ FIN 1V/div

When passing black dots(800µm)

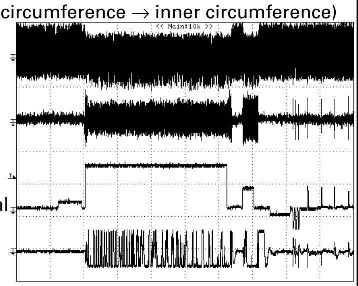
Ref.: REFO
Mode: Normal



⑬ RFAGC 1V/div 200ms/div
⑩ TE 1V/div
⑥ CIN 500mV/div
⑤ SIN 2V/div

During inside/outside search
(outer circumference → inner circumference)

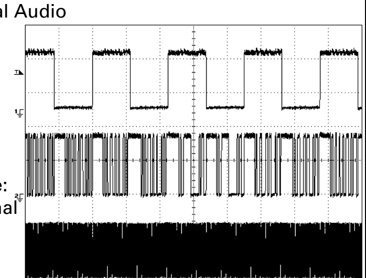
Ref.: REFO
Mode: Normal



⑭ LRCKIN 2V/div 10µs/div
⑮ DIN 2V/div
⑯ SCKIN 2V/div

Digital Audio

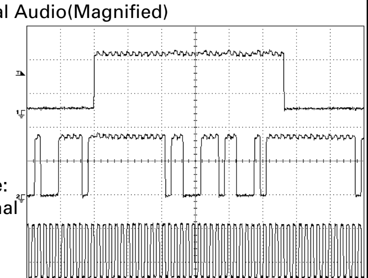
Ref.: GND
Mode: Normal



⑭ LRCKIN 2V/div 2µs/div
⑮ DIN 2V/div
⑯ SCKIN 2V/div

Digital Audio(Magnified)

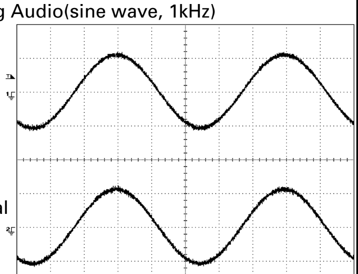
Ref.: REFO
Mode: Normal



⑰ LOUT 1V/div 200µs/div
⑱ ROUT 1V/div

Analog Audio(sine wave, 1kHz)

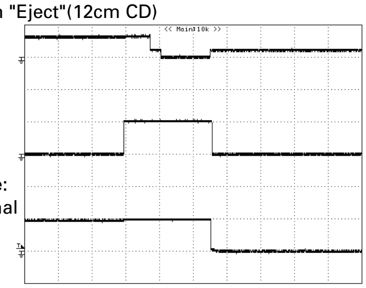
Ref.: AGND
Mode: Normal



① DSCSNS 5V/div 500ms/div
② CLCONT 5V/div
③ LOEJ 5V/div

When "Eject"(12cm CD)

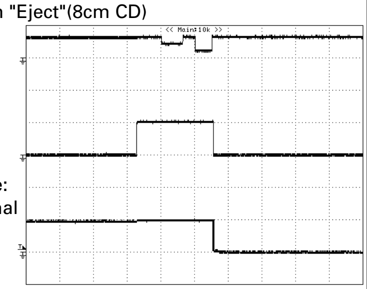
Ref.: GND
Mode: Normal



① DSCSNS 5V/div 10µs/div
② CLCONT 5V/div
③ LOEJ 5V/div

When "Eject"(8cm CD)

Ref.: GND
Mode: Normal

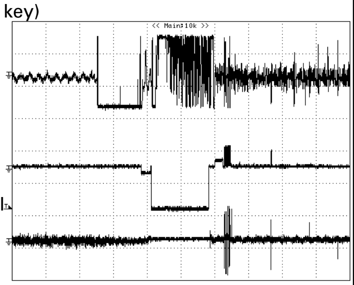


⑤ SIN 1V/div 500ms/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When switching to CD-ROM from CD-DA
(BAND key)

Ref.:
REFO

Mode:
Normal

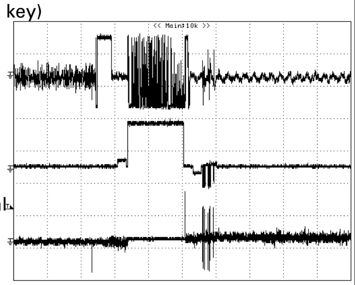


⑤ SIN 1V/div 500ms/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When switching to CD-DA from CD-ROM
(BAND key)

Ref.:
REFO

Mode:
Normal

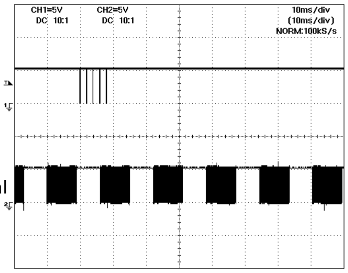


⑲ RXDO 5V/div 10ms/div
⑳ TXDO 5V/div

When DOWNLOAD

Ref.:
GND

Mode:
Normal

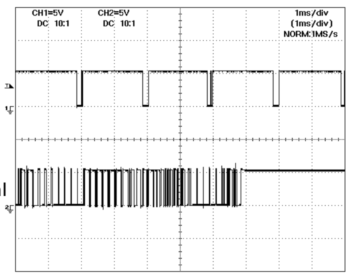


⑲ RXDO 5V/div 1ms/div
⑳ TXDO 5V/div

When DOWNLOAD(Magnified)

Ref.:
GND

Mode:
Normal

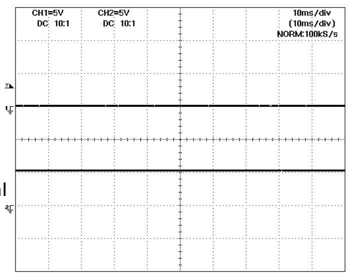


⑲ RXDO 5V/div 10ms/div
⑳ TXDO 5V/div

When PLAY

Ref.:
GND

Mode:
Normal

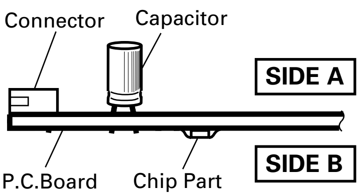


4. PCB CONNECTION DIAGRAM

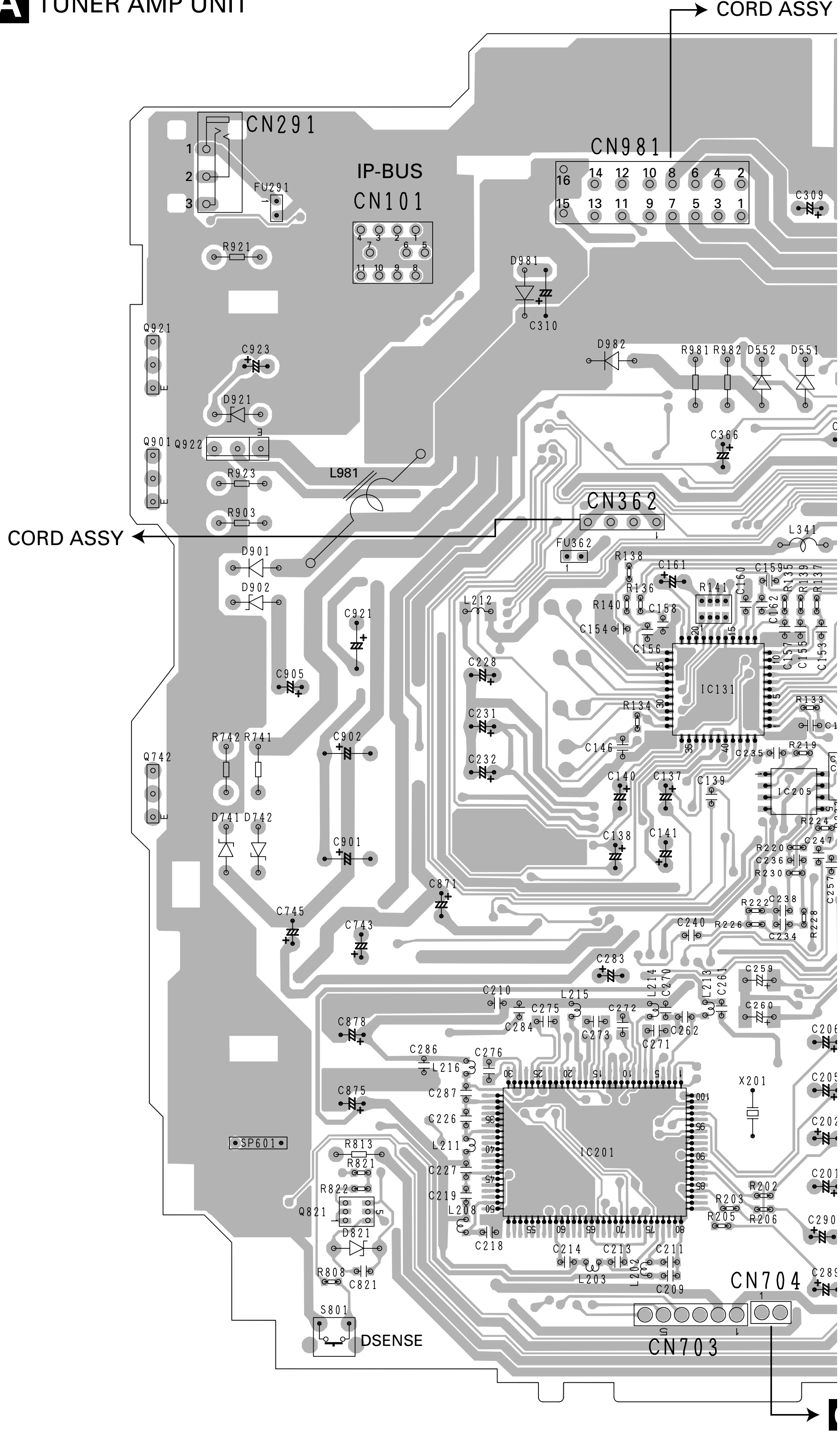
4.1 TUNER AMP UNIT

NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams

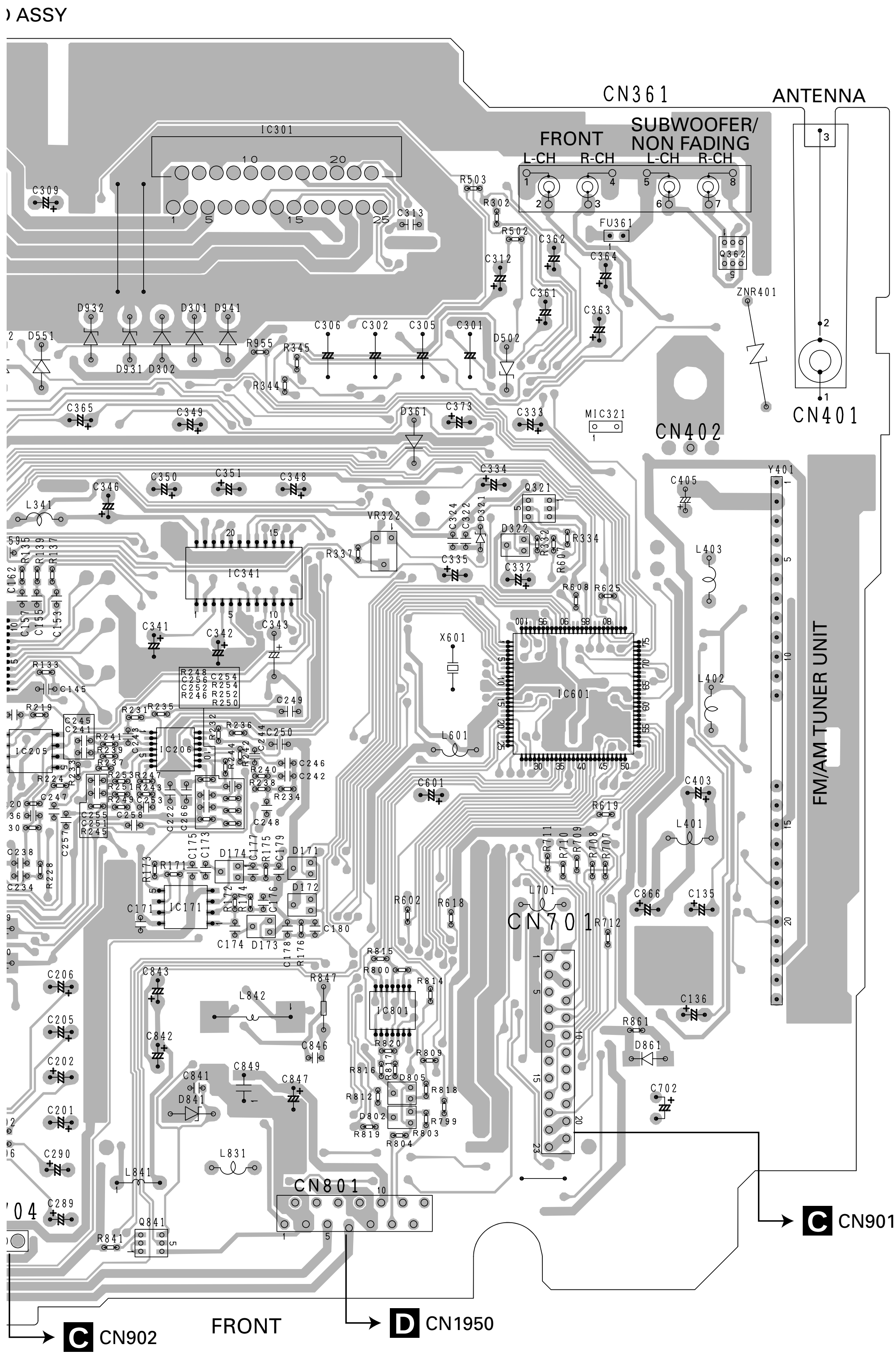


A TUNER AMP UNIT



A

SIDE A



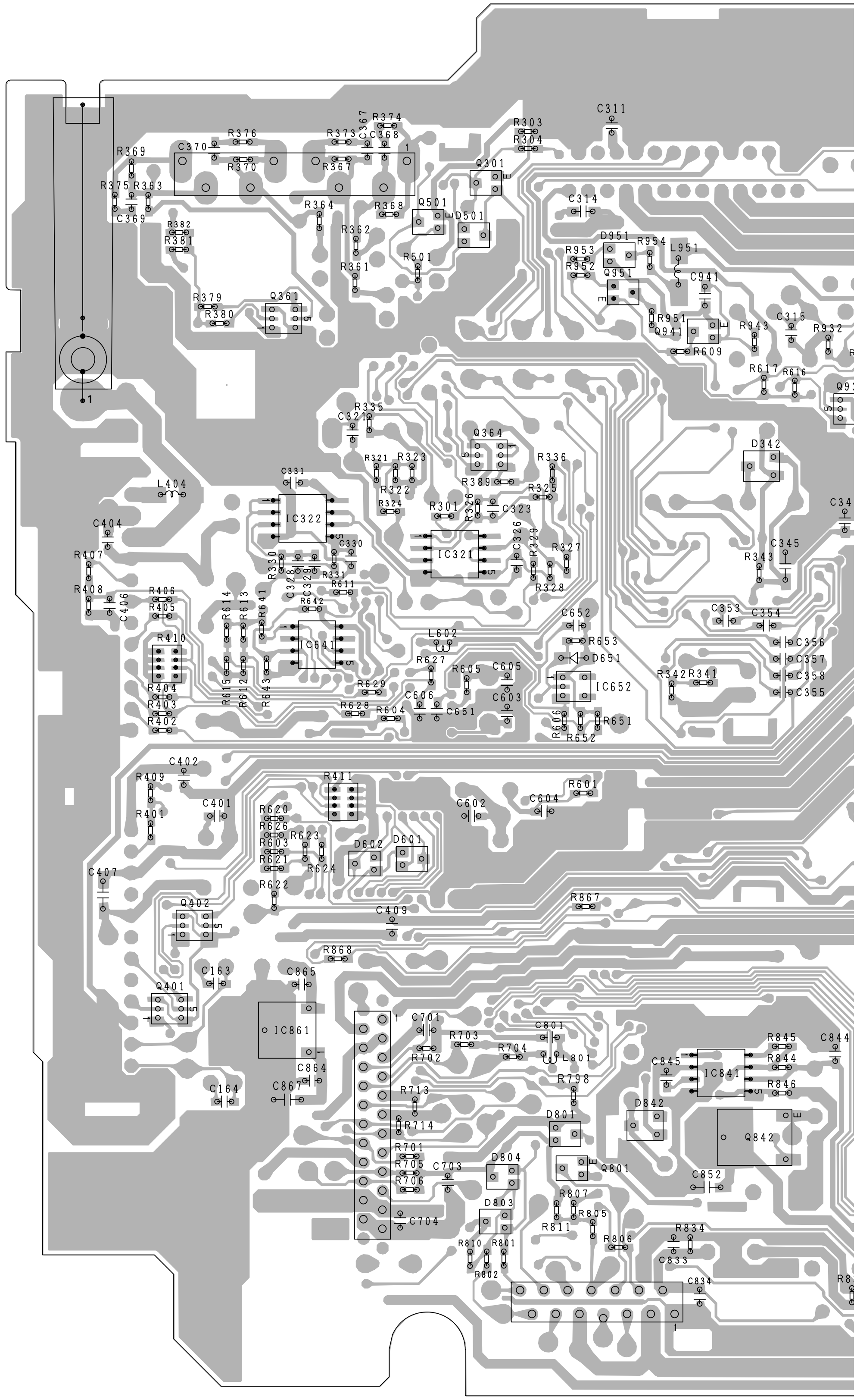
ADJ	IC,Q
	IC301
	Q362
	Q921
	Q901 Q922
	Q321
VR322	
	IC341
	IC131
	IC601
	Q742
	IC206 IC205
	IC171
	IC801
	IC201
	Q821
	Q841

A

A TUNER AMP UNIT

IC,Q

Q301
Q501
Q951
Q101 Q361 IC551
Q941
IC101
Q931
Q364
IC322
Q363 IC321
Q923
Q902
IC641
IC652
Q741
IC871
Q402
Q743
Q401 IC202
IC861
IC841
Q842
Q801
IC204 Q822
IC203
Q831



A

SIDE B

A

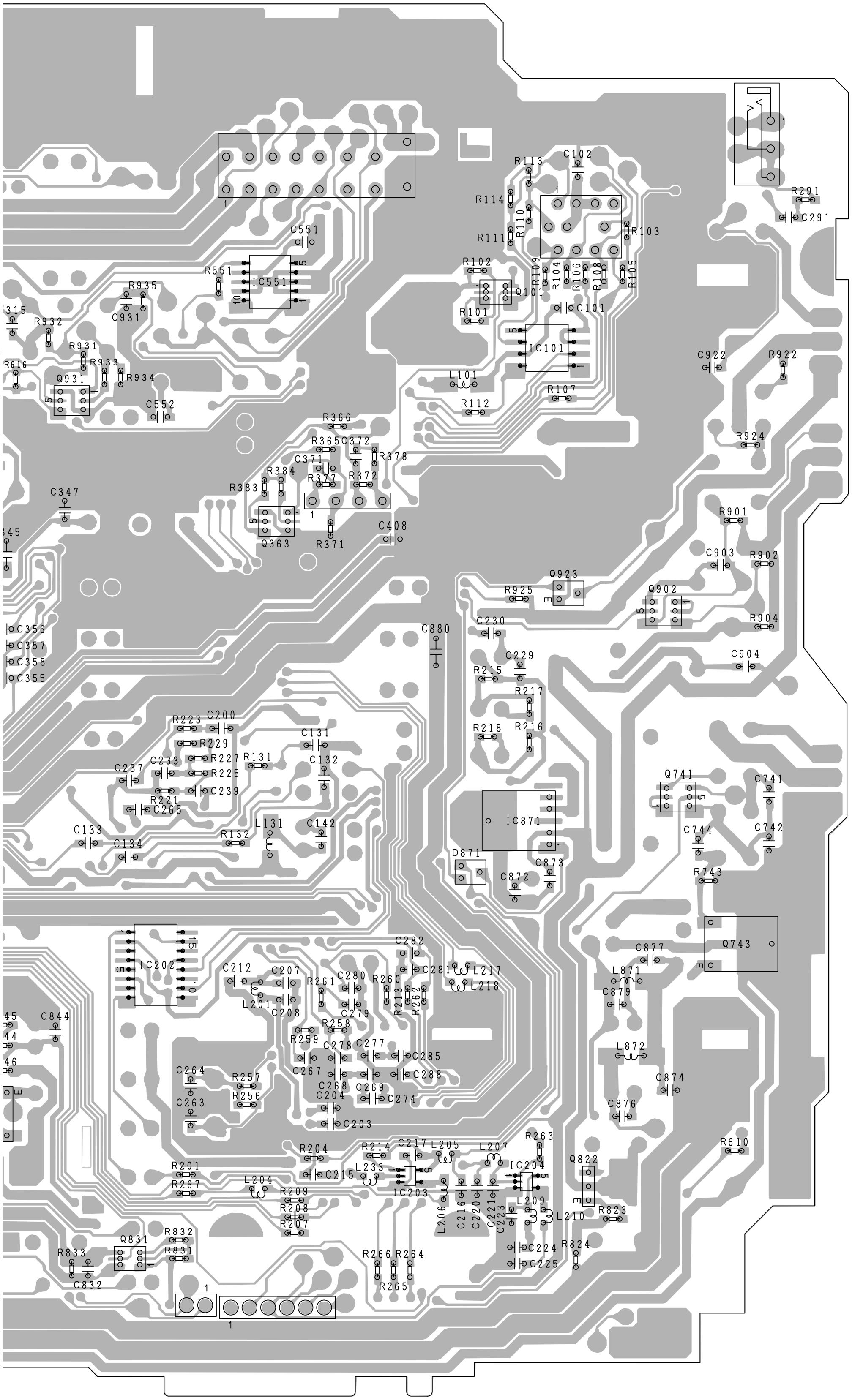
B

C

D

E

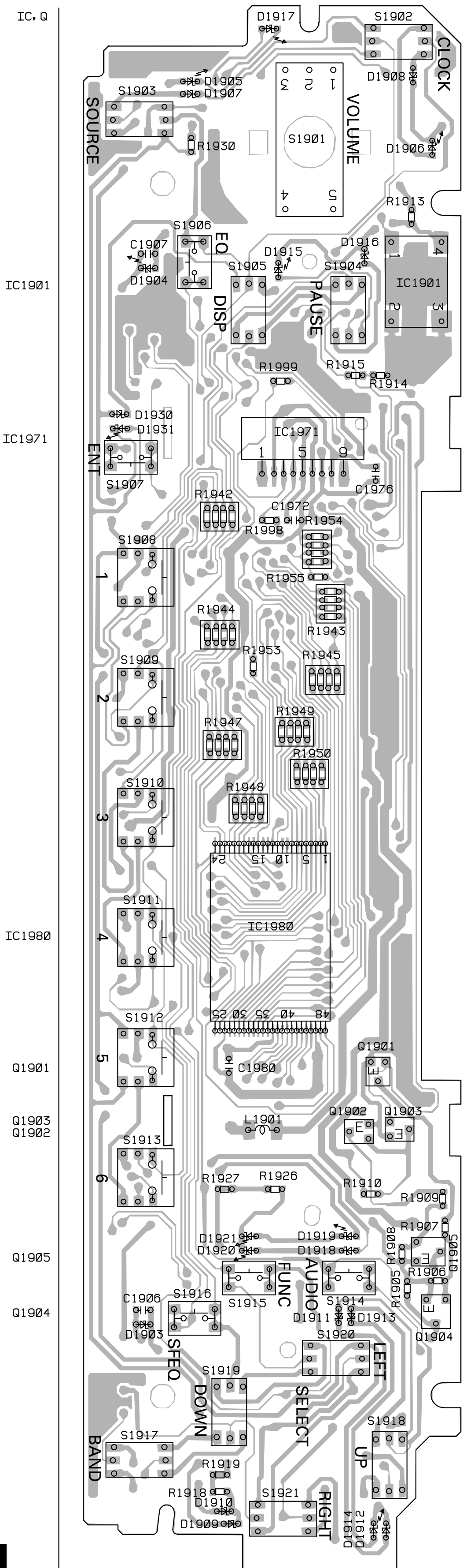
F



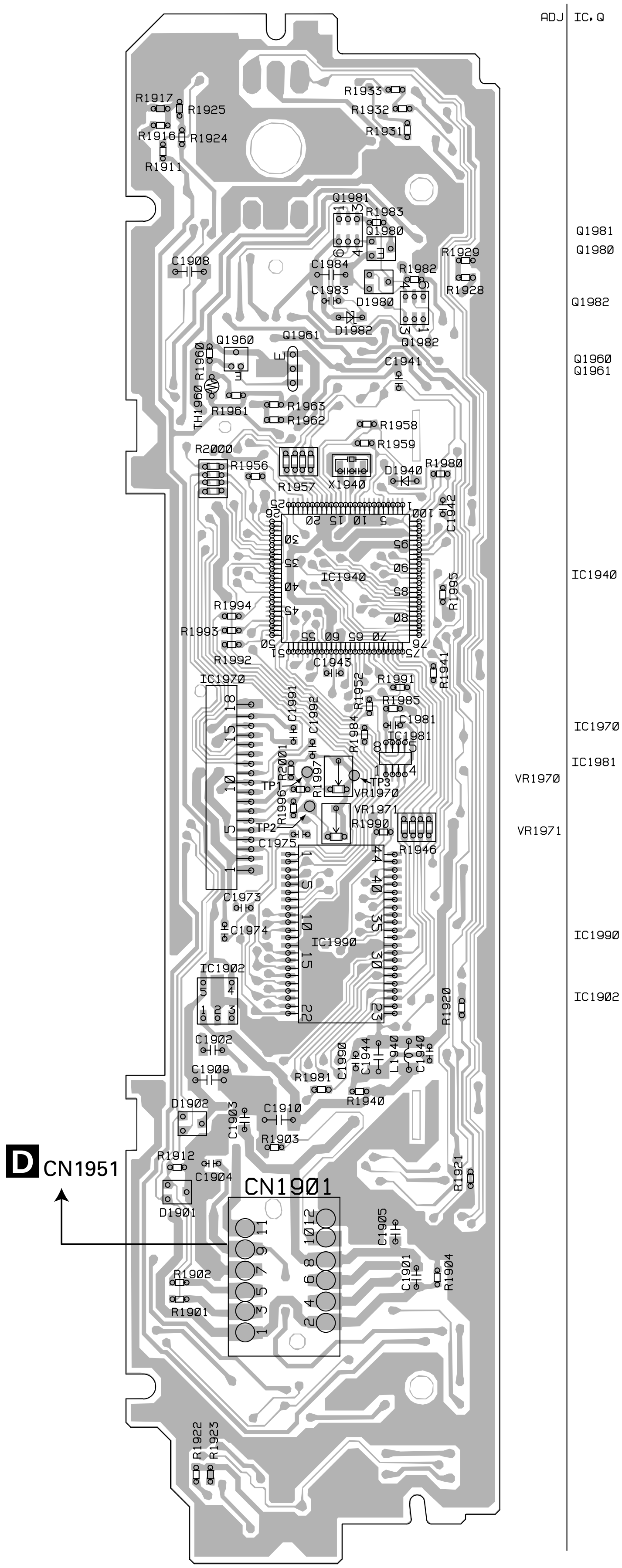
A

4.2 KEYBOARD UNIT

B KEYBOARD UNIT **SIDE A**



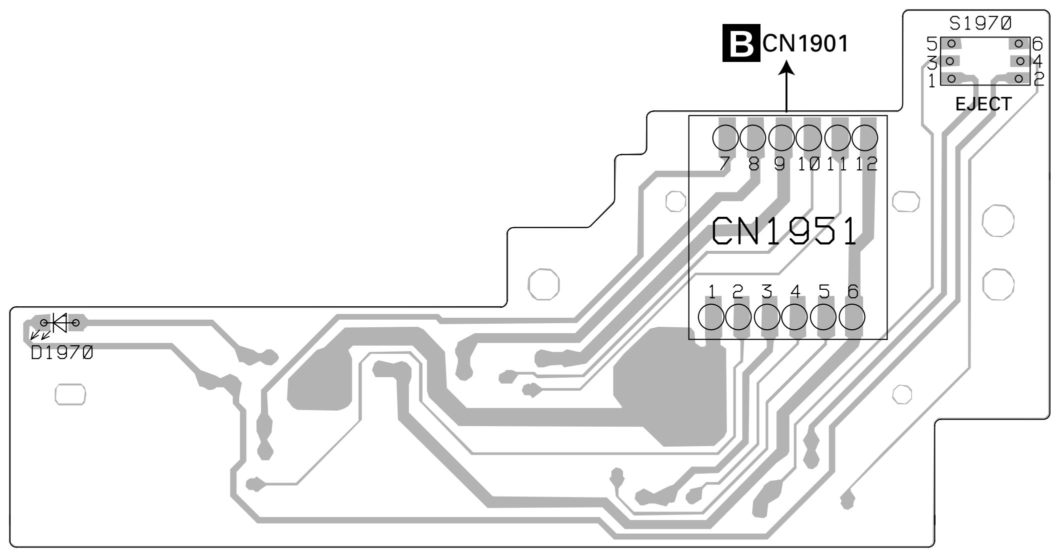
B KEYBOARD UNIT **SIDE B**



4.3 PANEL UNIT

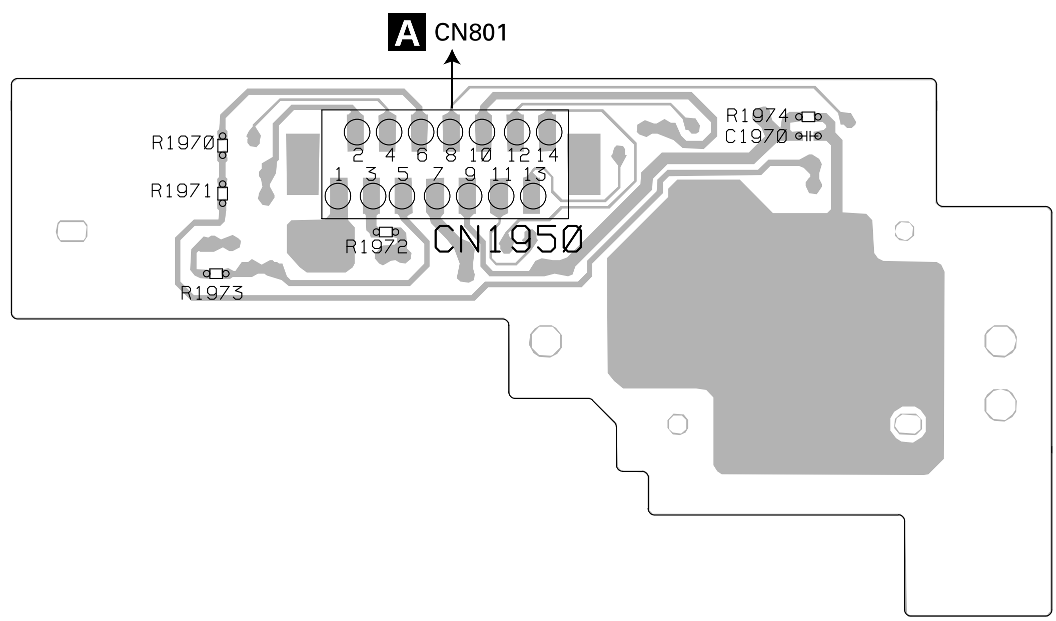
D PANEL UNIT

SIDE A



D PANEL UNIT

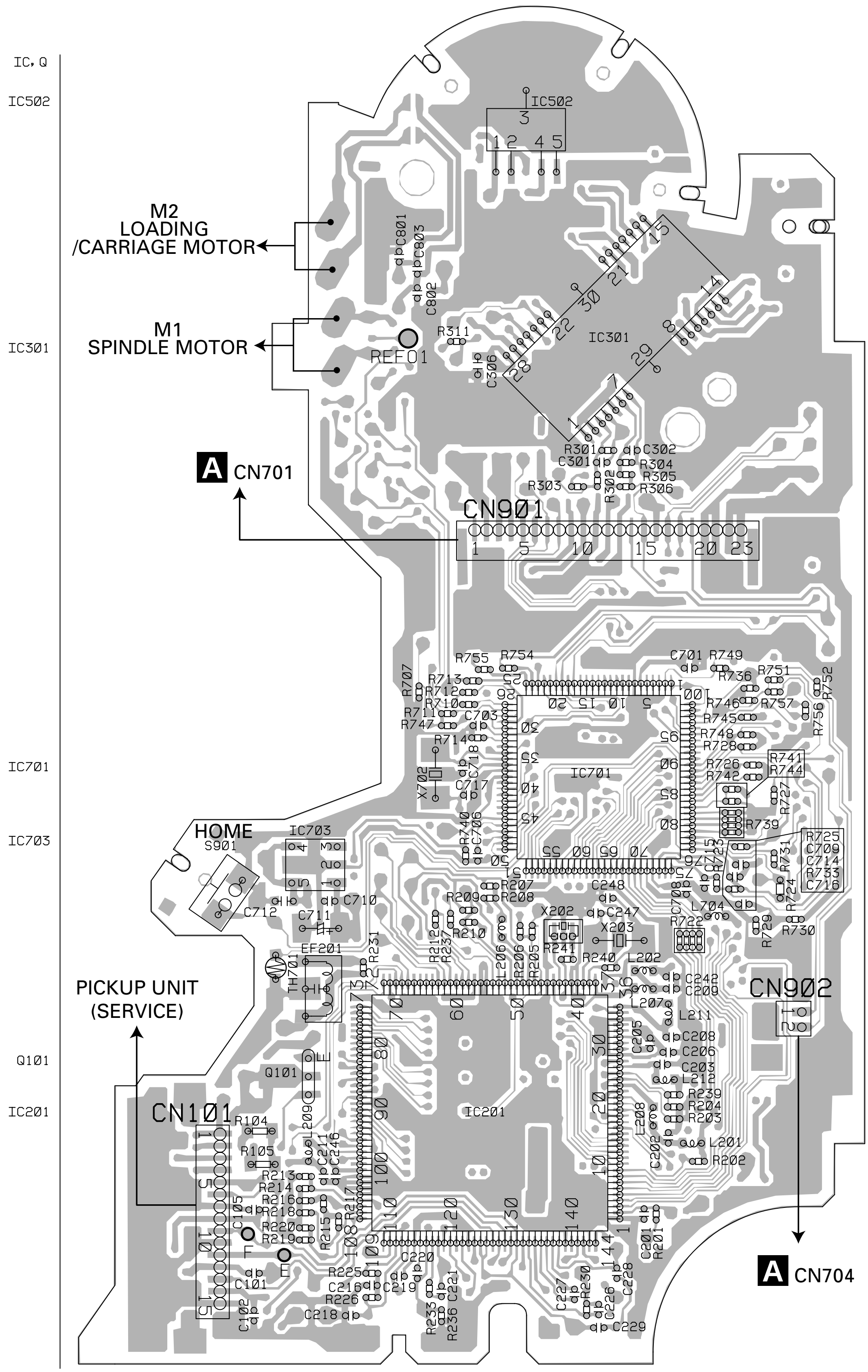
SIDE B



4.4 CD MECHANISM MODULE

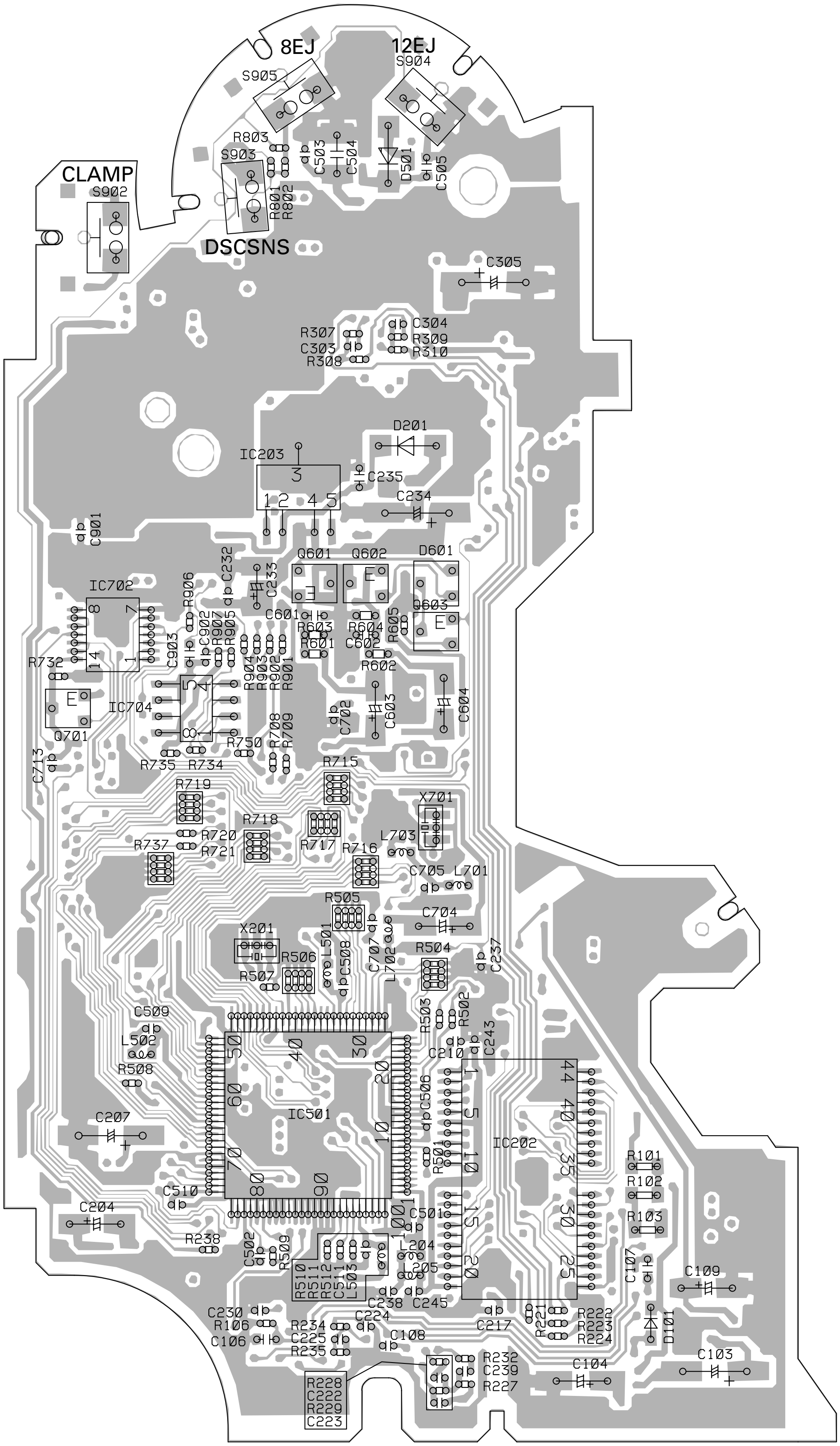
C CD CORE UNIT(S10MP3)

SIDE A



C CD CORE UNIT(S10MP3)

SIDE B



IC, Q

IC203

Q601 Q602
IC702
Q603

IC704
Q701

IC501
IC202

5. ELECTRICAL PARTS LIST

NOTES:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

  Chip Resistor

  RS1/○S○○○J,RS1/○○S○○○J

  Chip Capacitor (except for CQS.....)

  CKS....., CCS....., CSZS.....

A Unit Number : CWM8707(DEH-P750MP/XN/UC)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	101	IC	HA12187FP
IC	131	IC	PML009A
IC	171	IC	NJM4558MD
IC	301	IC	PAL007A
IC	341	IC	PA2028A
IC	601	IC	PD5804A
IC	652	IC	BD4835G
IC	801	IC	TC74VHCT125AFT
IC	841	IC	NJM2360M
IC	861	IC	BA033FP
Q	101	Transistor	UMF23N
Q	301	Transistor	DTC124EU
Q	321	Transistor	IMD2A
Q	361	Transistor	HN1C03F
Q	362	Transistor	HN1C03F
Q	363	Transistor	HN1C03F
Q	364	Transistor	IMD2A
Q	501	Transistor	2SC4081
Q	741	Transistor	IMD2A
Q	742	Transistor	2SD2375
Q	743	Transistor	2SD1760F5
Q	801	Transistor	DTC143EU
Q	821	Transistor	IMD2A
Q	822	Transistor	2SD1767
Q	831	Transistor	UMF23N
Q	841	Transistor	IMD2A
Q	842	Transistor	2SD1760F5
Q	901	Transistor	2SD2375
Q	902	Transistor	IMD2A
Q	921	Transistor	2SD2375
Q	922	Transistor	2SB1243
Q	923	Transistor	DTC114EU
Q	931	Transistor	IMX1
Q	941	Transistor	DTC114EU
Q	951	Transistor	2SA1576A
D	171	Diode	DAP202U
D	172	Diode	DAN202U
D	173	Diode Network	DA204U
D	174	Diode Network	DA204U
D	301	Diode	MPG06G-6415G50
D	302	Diode	MPG06G-6415G50
D	322	Diode	RB706F-40
D	342	Diode	1SS396
D	361	Diode	1SS133
D	501	Diode	DAN202U
D	502	Diode	HZS9L(A2)
D	741	Diode	HZS9L(B1)
D	742	Diode	HZS6L(C1)
D	801	Diode Network	DA204U
D	802	Diode	DAN202U

=====Circuit Symbol and No.		===Part Name	Part No.
D	803	Diode	DAP202U
D	804	Diode	DAN202U
D	805	Diode	DAP202U
D	821	Diode	HZS11L(A1)
D	841	Diode	HZS11L(A1)
D	842	Diode	RB411D
D	901	Diode	MPG06G-6415G50
D	902	Diode	HZS6L(B2)
D	921	Diode	HZS9L(B3)
D	931	Diode	HZS7L(C3)
D	932	Diode	HZS7L(A1)
D	941	Diode	MPG06G-6415G50
D	951	Diode	DAN202U
D	981	Diode	MPG06G-6415G50
D	982	Diode	MPG06G-6415G50
ZNR	401	Surge Protector	DSP-201M-A21F
L	101	Inductor	LCTA2R2J2520
L	131	Inductor	LCTA2R2J2520
L	341	Ferri-Inductor	LAU220K
L	401	Inductor	LAU1R0K
L	402	Ferri-Inductor	LAU100K
L	403	Inductor	LAU1R0K
L	404	Inductor	LCTA4R7J2520
L	601	Ferri-Inductor	LAU100K
L	701	Ferri-Inductor	LAU100K
L	801	Inductor	CTF1379
L	831	Ferri-Inductor	LAU100K
L	842	Inductor	CTF1510
L	951	Inductor	CTF1530
L	981	Choke Coil 600μH	CTH1280
X	601	Radiator 10.00MHz	CSS1475
S	801	Switch(DSENSE)	CSN1039
VR	322	Semi-fixed 10kΩ(B)	CCP1229
FU	361	Fuse 3A	CEK1286
FU	362	Fuse 3A	CEK1286
MIC	321	Microphone	CPM1011
SP	601	Buzzer	CPV1062
		FM/AM Tuner Unit	CWE1646
		Fuse 10A	CEK1208

RESISTORS

Circuit Symbol	No.	Part Name	Part No.
R	101		RS1/16S562J
R	102		RS1/16S332J
R	103		RS1/16S181J
R	104		RS1/16S181J
R	105		RS1/16S223J
R	106		RS1/16S223J
R	107		RS1/16S102J
R	108		RS1/16S102J
R	109		RS1/16S222J
R	110		RS1/16S101J

=====Circuit Symbol and No.===Part Name			Part No.
R	111		RS1/16S101J
R	112		RS1/16S103J
R	113		RS1/16S150J
R	114		RS1/16S470J
R	131		RS1/16S102J
R	132		RS1/16S102J
R	133		RS1/16S102J
R	134		RS1/16S102J
R	135		RS1/16S101J
R	136		RS1/16S101J
R	137		RS1/16S101J
R	138		RS1/16S101J
R	139		RS1/16S101J
R	140		RS1/16S101J
R	141		RAB4C102J
R	171		RS1/16S104J
R	172		RS1/16S104J
R	173		RS1/16S563J
R	174		RS1/16S563J
R	175		RS1/16S474J
R	176		RS1/16S474J
R	301		RS1/16S103J
R	302		RS1/16S103J
R	303		RS1/16S103J
R	304		RS1/16S331J
R	323		RS1/16S560J
R	332		RS1/16S104J
R	334		RS1/16S104J
R	335		RS1/16S222J
R	341		RS1/16S103J
R	342		RS1/16S103J
R	361		RS1/16S820J
R	362		RS1/16S820J
R	363		RS1/16S820J
R	364		RS1/16S820J
R	365		RS1/16S820J
R	366		RS1/16S820J
R	367		RS1/16S223J
R	368		RS1/16S223J
R	369		RS1/16S223J
R	370		RS1/16S223J
R	371		RS1/16S223J
R	372		RS1/16S223J
R	373		RS1/16S471J
R	374		RS1/16S471J
R	375		RS1/16S471J
R	376		RS1/16S471J
R	377		RS1/16S471J
R	378		RS1/16S471J
R	379		RS1/16S103J
R	380		RS1/16S103J
R	381		RS1/16S103J
R	382		RS1/16S103J
R	383		RS1/16S103J
R	384		RS1/16S103J
R	389		RS1/16S102J
R	401		RS1/16S681J
R	403		RS1/16S681J
R	404		RS1/16S681J
R	405		RS1/16S681J
R	406		RS1/16S681J
R	407		RS1/16S681J
R	501		RS1/16S103J
R	502		RS1/16S473J
R	601		RS1/16S472J
R	602		RS1/16S104J
R	604		RS1/16S473J
R	605		RS1/16S0R0J
R	608		RS1/16S473J
R	609		RS1/16S104J

=====Circuit Symbol and No.===Part Name			Part No.
R	610		RS1/16S102J
R	613		RS1/16S104J
R	614		RS1/16S104J
R	616		RS1/16S104J
R	617		RS1/16S104J
R	627		RS1/16S681J
R	628		RS1/16S681J
R	629		RS1/16S681J
R	642		RS1/16S104J
R	651		RS1/16S102J
R	652		RS1/16S102J
R	653		RS1/16S183J
R	702		RS1/16S473J
R	703		RS1/16S682J
R	704		RS1/16S682J
R	705		RS1/16S682J
R	706		RS1/16S682J
R	707		RS1/16S221J
R	708		RS1/16S221J
R	709		RS1/16S221J
R	710		RS1/16S221J
R	711		RS1/16S221J
R	712		RS1/16S221J
R	713		RS1/16S0R0J
R	714		RS1/16S0R0J
R	741		RD1/4PU391J
R	742		RD1/4PU221J
R	743		RS1/16S331J
R	798		RS1/16S104J
R	799		RS1/16S102J
R	801		RS1/16S222J
R	802		RS1/16S222J
R	803		RS1/16S222J
R	804		RS1/16S222J
R	805		RS1/16S222J
R	806		RS1/16S472J
R	807		RS1/16S222J
R	808		RS1/16S102J
R	809		RS1/16S473J
R	810		RS1/16S104J
R	811		RS1/16S473J
R	812		RS1/16S563J
R	813		RD1/4PU391J
R	814		RS1/16S102J
R	815		RS1/16S104J
R	816		RS1/16S104J
R	817		RS1/16S102J
R	818		RS1/16S102J
R	819		RS1/16S472J
R	821		RS1/16S221J
R	822		RS1/16S221J
R	823		RS1/16S1R0J
R	831		RS1/16S472J
R	832		RS1/16S102J
R	833		RS1/16S472J
R	841		RS1/16S821J
R	844		RS1/16S1R0J
R	845		RS1/16S391J
R	846		RS1/16S121J
R	847		RD1/4PU152J
R	861		RS1/16S0R0J
R	901		RS1/16S223J
R	902		RS1/16S332J
R	903		RD1/4PU391J
R	904		RS1/16S0R0J
R	921		RD1/4PU221J
R	922		RS1/16S152J
R	923		RD1/4PU152J
R	924		RS1/16S223J
R	925		RS1/16S223J

=====Circuit Symbol and No.===Part Name			Part No.
R	931		RS1/16S104J
R	932		RS1/16S473J
R	933		RS1/16S103J
R	934		RS1/16S473J
R	935		RS1/16S472J
R	943		RS1/16S103J
R	951		RS1/16S102J
R	952		RS1/16S472J
R	953		RS1/16S472J
R	954		RS1/16S153J
R	955		RS1/16S104J
R	981		RD1/4PU102J
R	982		RD1/4PU102J

CAPACITORS

=====Circuit Symbol and No.===Part Name			Part No.
C	102		CKSRYB104K25
C	131		CCSQCH152J50
C	132		CCSQCH152J50
C	133		CKSRYB105K10
C	134		CKSRYB105K10
C	137		CEAL1R0M50
C	138		CEAL1R0M50
C	139		CKSRYB105K10
C	140		CEAL1R0M50
C	141		CEJQ470M10
C	142		CKSRYB104K25
C	143		CEALNP4R7M16
C	144		CEJQNP4R7M16
C	145		CCSQCH152J50
C	146		CCSQCH152J50
C	147		CEALNP4R7M16
C	148		CEJQNP4R7M16
C	149		CEALNP4R7M16
C	150		CEJQNP4R7M16
C	151		CEALNP4R7M16
C	152		CEJQNP4R7M16
C	153		CCSRCH100D50
C	154		CCSRCH100D50
C	155		CCSRCH100D50
C	156		CCSRCH100D50
C	157		CCSRCH100D50
C	158		CCSRCH100D50
C	159		CKSRYB474K10
C	160		CKSRYB474K10
C	161		CEJQ100M50
C	163		CKSRYB104K25
C	164		CKSRYB104K25
C	171		CKSRYB103K50
C	173		CKSRYB104K25
C	174		CKSRYB104K25
C	175		CKSRYB104K25
C	176		CKSRYB104K25
C	177		CKSRYB474K10
C	178		CKSRYB474K10
C	179		CCSRCH101J50
C	180		CCSRCH101J50
C	301		CFTNA224J50
C	302		CFTNA224J50
C	305		CFTNA224J50
C	306		CFTNA224J50
C	309		CEHAR330M10
C	310	3300µF/16V	CCH1486
C	311		CKSRYB104K25
C	312		CEJQ100M16
C	313		CKSQYB225K10
C	314		CKSQYB225K10
C	333		CEJQ220M25
C	334		CEJQ100M50
C	335		CEJQ100M50
C	341		CEAL4R7M35
C	342		CEJQ101M16
C	343		CASAQ3R3M16
C	345		CKSYB684K25
C	346		CEAL100M16
C	347		CKSQYB225K10
C	348		CEJQ330M25
C	349		CEJQ330M25
C	350		CEJQ330M25
C	351		CEJQ330M25
C	353		CKSRYB105K10
C	354		CKSRYB105K10
C	355		CKSRYB105K10
C	356		CKSRYB105K10
C	357		CKSRYB105K10
C	358		CKSRYB105K10
C	361		CEJQ100M50
C	362		CEJQ100M25
C	363		CEJQ100M50
C	364		CEJQ100M25
C	365		CEJQ100M50
C	366		CEJQ100M50
C	367		CKSRYB222K50
C	368		CKSRYB222K50
C	369		CKSRYB222K50
C	370		CKSRYB222K50
C	371		CKSRYB222K50
C	372		CKSRYB222K50
C	373		CEJQ220M25
C	401		CKSRYB103K50
C	402		CKSRYB103K50
C	403		CEJQ470M10
C	404		CKSRYB103K50
C	405		CEJQ101M10
C	408		CCSRCH101J50
C	601		CEJQ4R7M35
C	602		CKSRYB103K50
C	603		CCSRCH180J50
C	605		CCSRCH220J50
C	606		CCSRCH470J50
C	652		CKSRYB105K10
C	702	470µF/10V	CCH1438
C	741		CKSRYB473K50
C	742		CKSRYB102K50
C	743		CEJQ101M16
C	744		CKSRYB473K50
C	745		CEHAR101M10
C	801		CKSRYB473K50
C	821		CKSRYB473K50
C	832		CCSRCH101J50
C	833		CKSRYB473K50
C	834		CKSRYB105K10
C	841		CKSRYB104K25
C	842		CEJQ470M16
C	843		CEJQ101M10
C	844		CKSRYB104K25
C	845		CCSRCH331J50
C	846		CKSRYB103K50
C	847		CEJQ470M25
C	849	4.7µF	CCG1111
C	864		CKSRYB474K10
C	865		CKSRYB103K50
C	866		CEJQ220M6R3
C	867		CKSYB475K10
C	901	470µF/16V	CCH1331
C	902	470µF/16V	CCH1331
C	903		CKSRYB472K50
C	904		CKSRYB103K50
C	905		CEHAR470M16
C	921		CEJQ221M10
C	922		CKSRYB103K50

Circuit Symbol	No.	Part Name	Part No.
C	923		CEHAR101M10
C	931		CKSRYB104K25
C	941		CKSQYB105K16

A Unit Number : CWM8708(DEH-P7500MP/XN/UC)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

Circuit Symbol	No.	Part Name	Part No.
IC	101	IC	HA12187FP
IC	131	IC	PML009A
IC	171	IC	NJM4558MD
IC	301	IC	PAL007A
IC	341	IC	PA2028A
IC	601	IC	PD5804A
IC	652	IC	BD4835G
IC	801	IC	TC74VHCT125AFT
IC	841	IC	NJM2360M
IC	861	IC	BA033FP
Q	101	Transistor	UMF23N
Q	301	Transistor	DTC124EU
Q	321	Transistor	IMD2A
Q	361	Transistor	IMH3A
Q	362	Transistor	IMH3A
Q	363	Transistor	IMH3A
Q	364	Transistor	IMD2A
Q	501	Transistor	2SC4081
Q	741	Transistor	IMD2A
Q	742	Transistor	2SD2375
Q	743	Transistor	2SD1760F5
Q	801	Transistor	DTC143EU
Q	821	Transistor	IMD2A
Q	822	Transistor	2SD1767
Q	831	Transistor	UMF23N
Q	841	Transistor	IMD2A
Q	842	Transistor	2SD1760F5
Q	901	Transistor	2SD2375
Q	902	Transistor	IMD2A
Q	921	Transistor	2SD2375
Q	922	Transistor	2SB1243
Q	923	Transistor	DTC114EU
Q	931	Transistor	IMX1
Q	941	Transistor	DTC114EU
Q	951	Transistor	2SA1576A
D	171	Diode	DAP202U
D	172	Diode	DAN202U
D	173	Diode Network	DA204U
D	174	Diode Network	DA204U
D	301	Diode	MPG06G-6415G50
D	302	Diode	MPG06G-6415G50
D	322	Diode	RB706F-40
D	361	Diode	1SS133
D	501	Diode	DAN202U
D	502	Diode	HZS9L(A2)
D	741	Diode	HZS9L(B1)
D	742	Diode	HZS6L(C1)
D	801	Diode Network	DA204U
D	802	Diode	DAN202U
D	803	Diode	DAP202U
D	804	Diode	DAN202U
D	805	Diode	DAP202U
D	821	Diode	HZS11L(A1)
D	841	Diode	HZS11L(A1)
D	842	Diode	RB411D
D	901	Diode	MPG06G-6415G50
D	902	Diode	HZS6L(B2)
D	921	Diode	HZS9L(B3)
D	931	Diode	HZS7L(C3)
D	932	Diode	HZS7L(A1)
D	941	Diode	MPG06G-6415G50
D	951	Diode	DAN202U
D	981	Diode	MPG06G-6415G50
D	982	Diode	MPG06G-6415G50
ZNR	401	Surge Protector	DSP-201M-A21F
L	101	Inductor	LCTA2R2J2520
L	131	Inductor	LCTA2R2J2520
L	341	Ferri-Inductor	LAU220K
L	401	Inductor	LAU1R0K
L	402	Ferri-Inductor	LAU100K
L	403	Inductor	LAU1R0K
L	404	Inductor	LCTA4R7J2520
L	601	Ferri-Inductor	LAU100K
L	701	Ferri-Inductor	LAU100K
L	801	Inductor	CTF1379
L	831	Ferri-Inductor	LAU100K
L	842	Inductor	CTF1510
L	951	Inductor	CTF1530
L	981	Choke Coil 600μH	CTH1280
X	601	Radiator 10.00MHz	CSS1475
S	801	Switch(DSENS)	CSN1039
VR	322	Semi-fixed 10kΩ(B)	CCP1229
FU	361	Fuse 3A	CEK1286
FU	362	Fuse 3A	CEK1286
MIC	321	Microphone	CPM1011
SP	601	Buzzer	CPV1062
		FM/AM Tuner Unit	CWE1646
		Fuse 10A	CEK1208

RESISTORS

Circuit Symbol	No.	Part Name	Part No.
R	101		RS1/16S562J
R	102		RS1/16S332J
R	103		RS1/16S181J
R	104		RS1/16S181J
R	105		RS1/16S223J
R	106		RS1/16S223J
R	107		RS1/16S102J
R	108		RS1/16S102J
R	109		RS1/16S222J
R	110		RS1/16S101J
R	111		RS1/16S101J
R	112		RS1/16S103J
R	113		RS1/16S150J
R	114		RS1/16S470J
R	131		RS1/16S102J
R	132		RS1/16S102J
R	133		RS1/16S102J
R	134		RS1/16S102J
R	135		RS1/16S101J
R	136		RS1/16S101J
R	137		RS1/16S101J
R	138		RS1/16S101J
R	139		RS1/16S101J
R	140		RS1/16S101J
R	141		RAB4C102J
R	171		RS1/16S104J
R	172		RS1/16S104J
R	173		RS1/16S563J
R	174		RS1/16S563J
R	175		RS1/16S474J
R	176		RS1/16S474J
R	301		RS1/16S103J
R	302		RS1/16S103J
R	303		RS1/16S103J
R	304		RS1/16S331J
R	323		RS1/16S560J
R	332		RS1/16S104J
R	334		RS1/16S104J
R	335		RS1/16S222J
R	341		RS1/16S103J

=====Circuit Symbol and No.===Part Name		Part No.
R	342	RS1/16S103J
R	343	RS1/16S0R0J
R	361	RS1/16S820J
R	362	RS1/16S820J
R	363	RS1/16S820J
R	364	RS1/16S820J
R	365	RS1/16S820J
R	366	RS1/16S820J
R	367	RS1/16S223J
R	368	RS1/16S223J
R	369	RS1/16S223J
R	370	RS1/16S223J
R	371	RS1/16S223J
R	372	RS1/16S223J
R	373	RS1/16S471J
R	374	RS1/16S471J
R	375	RS1/16S471J
R	376	RS1/16S471J
R	377	RS1/16S471J
R	378	RS1/16S471J
R	379	RS1/16S0R0J
R	380	RS1/16S0R0J
R	381	RS1/16S0R0J
R	382	RS1/16S0R0J
R	383	RS1/16S0R0J
R	384	RS1/16S0R0J
R	389	RS1/16S102J
R	401	RS1/16S681J
R	403	RS1/16S681J
R	404	RS1/16S681J
R	405	RS1/16S681J
R	406	RS1/16S681J
R	407	RS1/16S681J
R	501	RS1/16S103J
R	502	RS1/16S473J
R	601	RS1/16S472J
R	602	RS1/16S104J
R	604	RS1/16S473J
R	605	RS1/16S0R0J
R	608	RS1/16S473J
R	609	RS1/16S104J
R	610	RS1/16S102J
R	613	RS1/16S104J
R	615	RS1/16S104J
R	616	RS1/16S104J
R	617	RS1/16S104J
R	627	RS1/16S681J
R	628	RS1/16S681J
R	629	RS1/16S681J
R	642	RS1/16S104J
R	651	RS1/16S102J
R	652	RS1/16S102J
R	653	RS1/16S183J
R	702	RS1/16S473J
R	703	RS1/16S682J
R	704	RS1/16S682J
R	705	RS1/16S682J
R	706	RS1/16S682J
R	707	RS1/16S221J
R	708	RS1/16S221J
R	709	RS1/16S221J
R	710	RS1/16S221J
R	711	RS1/16S221J
R	712	RS1/16S221J
R	713	RS1/16S0R0J
R	714	RS1/16S0R0J
R	741	RD1/4PU391J
R	742	RD1/4PU221J
R	743	RS1/16S331J
R	798	RS1/16S104J

=====Circuit Symbol and No.===Part Name		Part No.
R	799	RS1/16S102J
R	801	RS1/16S222J
R	802	RS1/16S222J
R	803	RS1/16S222J
R	804	RS1/16S222J
R	805	RS1/16S222J
R	806	RS1/16S472J
R	807	RS1/16S222J
R	808	RS1/16S102J
R	809	RS1/16S473J
R	810	RS1/16S104J
R	811	RS1/16S473J
R	812	RS1/16S563J
R	813	RD1/4PU391J
R	814	RS1/16S102J
R	815	RS1/16S104J
R	816	RS1/16S104J
R	817	RS1/16S102J
R	818	RS1/16S102J
R	819	RS1/16S472J
R	821	RS1/16S221J
R	822	RS1/16S221J
R	823	RS1/16S1R0J
R	831	RS1/16S472J
R	832	RS1/16S102J
R	833	RS1/16S472J
R	841	RS1/16S821J
R	844	RS1/16S1R0J
R	845	RS1/16S391J
R	846	RS1/16S121J
R	847	RD1/4PU152J
R	861	RS1/16S0R0J
R	901	RS1/16S223J
R	902	RS1/16S332J
R	903	RD1/4PU391J
R	904	RS1/16S0R0J
R	921	RD1/4PU221J
R	922	RS1/16S152J
R	923	RD1/4PU152J
R	924	RS1/16S223J
R	925	RS1/16S223J
R	931	RS1/16S104J
R	932	RS1/16S473J
R	933	RS1/16S103J
R	934	RS1/16S473J
R	935	RS1/16S472J
R	943	RS1/16S103J
R	951	RS1/16S102J
R	952	RS1/16S472J
R	953	RS1/16S472J
R	954	RS1/16S153J
R	955	RS1/16S104J
R	981	RD1/4PU102J
R	982	RD1/4PU102J

CAPACITORS

C	102	CKSRYB104K25
C	131	CCSQCH152J50
C	132	CCSQCH152J50
C	133	CKSRYB105K10
C	134	CKSRYB105K10
C	137	CEAL1R0M50
C	138	CEAL1R0M50
C	139	CKSRYB105K10
C	140	CEAL1R0M50
C	141	CEJQ470M10
C	142	CKSRYB104K25
C	143	CEALNP4R7M16
C	144	CEJQNP4R7M16
C	145	CCSQCH152J50
C	146	CCSQCH152J50

Circuit Symbol	No.	Part Name	Part No.
C	147		CEALNP4R7M16
C	148		CEJQNP4R7M16
C	149		CEALNP4R7M16
C	150		CEJQNP4R7M16
C	151		CEALNP4R7M16
C	152		CEJQNP4R7M16
C	153		CCSRCH100D50
C	154		CCSRCH100D50
C	155		CCSRCH100D50
C	156		CCSRCH100D50
C	157		CCSRCH100D50
C	158		CCSRCH100D50
C	159		CKSRYB474K10
C	160		CKSRYB474K10
C	161		CEJQ100M50
C	163		CKSRYB104K25
C	164		CKSRYB104K25
C	171		CKSRYB103K50
C	173		CKSRYB104K25
C	174		CKSRYB104K25
C	175		CKSRYB104K25
C	176		CKSRYB104K25
C	177		CKSRYB474K10
C	178		CKSRYB474K10
C	179		CCSRCH101J50
C	180		CCSRCH101J50
C	301		CFTNA224J50
C	302		CFTNA224J50
C	305		CFTNA224J50
C	306		CFTNA224J50
C	309		CEHAR330M10
C	310	3300μF/16V	CCH1486
C	311		CKSRYB104K25
C	312		CEJQ100M16
C	313		CKSQYB225K10
C	314		CKSQYB225K10
C	333		CEJQ220M25
C	334		CEJQ100M50
C	335		CEJQ100M50
C	341		CEAL4R7M35
C	342		CEJQ101M16
C	343		CASAQ3R3M16
C	345		CKSYB684K25
C	346		CEAL100M16
C	347		CKSQYB225K10
C	348		CEJQ330M25
C	349		CEJQ330M25
C	353		CKSRYB105K10
C	354		CKSRYB105K10
C	355		CKSRYB105K10
C	356		CKSRYB105K10
C	357		CKSRYB105K10
C	358		CKSRYB105K10
C	361		CEJQ100M50
C	362		CEJQ100M25
C	363		CEJQ100M50
C	364		CEJQ100M25
C	365		CEJQ100M50
C	366		CEJQ100M50
C	367		CKSRYB222K50
C	368		CKSRYB222K50
C	369		CKSRYB222K50
C	370		CKSRYB222K50
C	371		CKSRYB222K50
C	372		CKSRYB222K50
C	373		CEJQ220M25
C	401		CKSRYB103K50
C	402		CKSRYB103K50
C	403		CEJQ470M10
C	404		CKSRYB103K50
C	405		CEJQ101M10
C	408		CCSRCH101J50
C	601		CEJQ4R7M35
C	602		CKSRYB103K50
C	603		CCSRCH180J50
C	605		CCSRCH220J50
C	606		CCSRCH470J50
C	652		CKSRYB105K10
C	702	470μF/10V	CCH1438
C	741		CKSRYB473K50
C	742		CKSRYB102K50
C	743		CEJQ101M16
C	744		CKSRYB473K50
C	745		CEHAR101M10
C	801		CKSRYB473K50
C	821		CKSRYB473K50
C	832		CCSRCH101J50
C	833		CKSRYB473K50
C	834		CKSRYB105K10
C	841		CKSRYB104K25
C	842		CEJQ470M16
C	843		CEJQ101M10
C	844		CKSRYB104K25
C	845		CCSRCH331J50
C	846		CKSRYB103K50
C	847		CEJQ470M25
C	849	4.7μF	CCG1111
C	864		CKSRYB474K10
C	865		CKSRYB103K50
C	866		CEJQ220M6R3
C	867		CKSYB475K10
C	901	470μF/16V	CCH1331
C	902	470μF/16V	CCH1331
C	903		CKSRYB472K50
C	904		CKSRYB103K50
C	905		CEHAR470M16
C	921		CEJQ221M10
C	922		CKSRYB103K50
C	923		CEHAR101M10
C	931		CKSRYB104K25
C	941		CKSQYB105K16

A Unit Number : CWM8709(DEH-P7550MP/XN/ES)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

Circuit Symbol	No.	Part Name	Part No.
IC	101	IC	HA12187FP
IC	131	IC	PML009A
IC	171	IC	NJM4558MD
IC	301	IC	PAL007A
IC	341	IC	PA2028A
IC	601	IC	PD5804A
IC	652	IC	BD4835G
IC	801	IC	TC74VHCT125AFT
IC	841	IC	NJM2360M
IC	861	IC	BA033FP
Q	101	Transistor	UMF23N
Q	301	Transistor	DTC124EU
Q	321	Transistor	IMD2A
Q	361	Transistor	IMH3A
Q	362	Transistor	IMH3A
Q	363	Transistor	IMH3A
Q	364	Transistor	IMD2A
Q	501	Transistor	2SC4081
Q	741	Transistor	IMD2A
Q	742	Transistor	2SD2375
Q	743	Transistor	2SD1760F5
Q	801	Transistor	DTC143EU
Q	821	Transistor	IMD2A
Q	822	Transistor	2SD1767
Q	831	Transistor	UMF23N

Circuit Symbol	No.	Part Name	Part No.
Q	841	Transistor	IMD2A
Q	842	Transistor	2SD1760F5
Q	901	Transistor	2SD2375
Q	902	Transistor	IMD2A
Q	921	Transistor	2SD2375
Q	922	Transistor	2SB1243
Q	923	Transistor	DTC114EU
Q	931	Transistor	IMX1
Q	941	Transistor	DTC114EU
Q	951	Transistor	2SA1576A
D	171	Diode	DAP202U
D	172	Diode	DAN202U
D	173	Diode Network	DA204U
D	174	Diode Network	DA204U
D	301	Diode	MPG06G-6415G50
D	302	Diode	MPG06G-6415G50
D	322	Diode	RB706F-40
D	361	Diode	1SS133
D	501	Diode	DAN202U
D	502	Diode	HZS9L(A2)
D	741	Diode	HZS9L(B1)
D	742	Diode	HZS6L(C1)
D	801	Diode Network	DA204U
D	802	Diode	DAN202U
D	803	Diode	DAP202U
D	804	Diode	DAN202U
D	805	Diode	DAP202U
D	821	Diode	HZS11L(A1)
D	841	Diode	HZS11L(A1)
D	842	Diode	RB411D
D	901	Diode	MPG06G-6415G50
D	902	Diode	HZS6L(B2)
D	921	Diode	HZS9L(B3)
D	931	Diode	HZS7L(C3)
D	932	Diode	HZS7L(A1)
D	941	Diode	MPG06G-6415G50
D	951	Diode	DAN202U
D	981	Diode	MPG06G-6415G50
D	982	Diode	MPG06G-6415G50
ZNR	401	Surge Protector	DSP-201M-A21F
L	101	Inductor	LCTA2R2J2520
L	131	Inductor	LCTA2R2J2520
L	341	Ferri-Inductor	LAU220K
L	401	Inductor	LAU1R0K
L	402	Ferri-Inductor	LAU100K
L	403	Inductor	LAU1R0K
L	404	Inductor	LCTA4R7J2520
L	601	Ferri-Inductor	LAU100K
L	701	Ferri-Inductor	LAU100K
L	801	Inductor	CTF1379
L	831	Ferri-Inductor	LAU100K
L	842	Inductor	CTF1510
L	951	Inductor	CTF1530
L	981	Choke Coil 600μH	CTH1280
X	601	Radiator 10.00MHz	CSS1475
S	801	Switch(DSENS)	CSN1039
VR	322	Semi-fixed 10kΩ(B)	CCP1229
FU	361	Fuse 3A	CEK1286
FU	362	Fuse 3A	CEK1286
MIC	321	Microphone	CPM1011
SP	601	Buzzer	CPV1062
		FM/AM Tuner Unit	CWE1646
		Fuse 10A	CEK1208

RESISTORS

Circuit Symbol	No.	Part Name	Part No.
R	101		RS1/16S562J
R	102		RS1/16S332J
R	103		RS1/16S181J
R	104		RS1/16S181J
R	105		RS1/16S223J
R	106		RS1/16S223J
R	107		RS1/16S102J
R	108		RS1/16S102J
R	109		RS1/16S222J
R	110		RS1/16S101J
R	111		RS1/16S101J
R	112		RS1/16S103J
R	113		RS1/16S150J
R	114		RS1/16S470J
R	131		RS1/16S102J
R	132		RS1/16S102J
R	133		RS1/16S102J
R	134		RS1/16S102J
R	135		RS1/16S101J
R	136		RS1/16S101J
R	137		RS1/16S101J
R	138		RS1/16S101J
R	139		RS1/16S101J
R	140		RS1/16S101J
R	141		RAB4C102J
R	171		RS1/16S104J
R	172		RS1/16S104J
R	173		RS1/16S563J
R	174		RS1/16S563J
R	175		RS1/16S474J
R	176		RS1/16S474J
R	301		RS1/16S103J
R	302		RS1/16S103J
R	303		RS1/16S103J
R	304		RS1/16S331J
R	323		RS1/16S560J
R	332		RS1/16S104J
R	334		RS1/16S104J
R	335		RS1/16S222J
R	341		RS1/16S103J
R	342		RS1/16S103J
R	343		RS1/16S0R0J
R	361		RS1/16S820J
R	362		RS1/16S820J
R	363		RS1/16S820J
R	364		RS1/16S820J
R	365		RS1/16S820J
R	366		RS1/16S820J
R	367		RS1/16S223J
R	368		RS1/16S223J
R	369		RS1/16S223J
R	370		RS1/16S223J
R	371		RS1/16S223J
R	372		RS1/16S223J
R	373		RS1/16S471J
R	374		RS1/16S471J
R	375		RS1/16S471J
R	376		RS1/16S471J
R	377		RS1/16S471J
R	378		RS1/16S471J
R	379		RS1/16S0R0J
R	380		RS1/16S0R0J
R	381		RS1/16S0R0J
R	382		RS1/16S0R0J
R	383		RS1/16S0R0J
R	384		RS1/16S0R0J
R	389		RS1/16S102J
R	401		RS1/16S681J
R	403		RS1/16S681J
R	404		RS1/16S681J
R	405		RS1/16S681J
R	406		RS1/16S681J
R	407		RS1/16S681J
R	501		RS1/16S103J
R	502		RS1/16S473J

Circuit Symbol	No.	Part Name	Part No.
R	601		RS1/16S472J
R	602		RS1/16S104J
R	604		RS1/16S473J
R	605		RS1/16S0R0J
R	608		RS1/16S473J
R	609		RS1/16S104J
R	610		RS1/16S102J
R	612		RS1/16S104J
R	614		RS1/16S104J
R	616		RS1/16S104J
R	617		RS1/16S104J
R	627		RS1/16S681J
R	628		RS1/16S681J
R	629		RS1/16S681J
R	642		RS1/16S104J
R	651		RS1/16S102J
R	652		RS1/16S102J
R	653		RS1/16S183J
R	702		RS1/16S473J
R	703		RS1/16S682J
R	704		RS1/16S682J
R	705		RS1/16S682J
R	706		RS1/16S682J
R	707		RS1/16S221J
R	708		RS1/16S221J
R	709		RS1/16S221J
R	710		RS1/16S221J
R	711		RS1/16S221J
R	712		RS1/16S221J
R	713		RS1/16S0R0J
R	714		RS1/16S0R0J
R	741		RD1/4PU391J
R	742		RD1/4PU221J
R	743		RS1/16S331J
R	798		RS1/16S104J
R	799		RS1/16S102J
R	801		RS1/16S222J
R	802		RS1/16S222J
R	803		RS1/16S222J
R	804		RS1/16S222J
R	805		RS1/16S222J
R	806		RS1/16S472J
R	807		RS1/16S222J
R	808		RS1/16S102J
R	809		RS1/16S473J
R	810		RS1/16S104J
R	811		RS1/16S473J
R	812		RS1/16S563J
R	813		RD1/4PU391J
R	814		RS1/16S102J
R	815		RS1/16S104J
R	816		RS1/16S104J
R	817		RS1/16S102J
R	818		RS1/16S102J
R	819		RS1/16S472J
R	821		RS1/16S221J
R	822		RS1/16S221J
R	823		RS1/16S1R0J
R	831		RS1/16S472J
R	832		RS1/16S102J
R	833		RS1/16S472J
R	841		RS1/16S821J
R	844		RS1/16S1R0J
R	845		RS1/16S391J
R	846		RS1/16S121J
R	847		RD1/4PU152J
R	861		RS1/16S0R0J
R	901		RS1/16S223J
R	902		RS1/16S332J
R	903		RD1/4PU391J
R	904		RS1/16S0R0J
R	921		RD1/4PU221J
R	922		RS1/16S152J
R	923		RD1/4PU152J
R	924		RS1/16S223J
R	925		RS1/16S223J
R	931		RS1/16S104J
R	932		RS1/16S473J
R	933		RS1/16S103J
R	934		RS1/16S473J
R	935		RS1/16S472J
R	943		RS1/16S103J
R	951		RS1/16S102J
R	952		RS1/16S472J
R	953		RS1/16S472J
R	954		RS1/16S153J
R	955		RS1/16S104J
R	981		RD1/4PU102J
R	982		RD1/4PU102J

CAPACITORS

Circuit Symbol	No.	Part Name	Part No.
C	102		CKSRYB104K25
C	131		CCSQCH152J50
C	132		CCSQCH152J50
C	133		CKSRYB105K10
C	134		CKSRYB105K10
C	137		CEAL1R0M50
C	138		CEAL1R0M50
C	139		CKSRYB105K10
C	140		CEAL1R0M50
C	141		CEJQ470M10
C	142		CKSRYB104K25
C	143		CEALNP4R7M16
C	144		CEJQNP4R7M16
C	145		CCSQCH152J50
C	146		CCSQCH152J50
C	147		CEALNP4R7M16
C	148		CEJQNP4R7M16
C	149		CEALNP4R7M16
C	150		CEJQNP4R7M16
C	151		CEALNP4R7M16
C	152		CEJQNP4R7M16
C	153		CCSRCH100D50
C	154		CCSRCH100D50
C	155		CCSRCH100D50
C	156		CCSRCH100D50
C	157		CCSRCH100D50
C	158		CCSRCH100D50
C	159		CKSRYB474K10
C	160		CKSRYB474K10
C	161		CEJQ100M50
C	163		CKSRYB104K25
C	164		CKSRYB104K25
C	171		CKSRYB103K50
C	173		CKSRYB104K25
C	174		CKSRYB104K25
C	175		CKSRYB104K25
C	176		CKSRYB104K25
C	177		CKSRYB474K10
C	178		CKSRYB474K10
C	179		CCSRCH101J50
C	180		CCSRCH101J50
C	301		CFTNA224J50
C	302		CFTNA224J50
C	305		CFTNA224J50
C	306		CFTNA224J50
C	309		CEHAR330M10
C	310	3300μF/16V	CCH1486
C	311		CKSRYB104K25
C	312		CEJQ100M16
C	313		CKSQYB225K10

=====Circuit Symbol and No.===Part Name			Part No.
C	314		CKSQYB225K10
C	333		CEJQ220M25
C	334		CEJQ100M50
C	335		CEJQ100M50
C	341		CEAL4R7M35
C	342		CEJQ101M16
C	343		CASAQ3R3M16
C	345		CKSYB684K25
C	346		CEAL100M16
C	347		CKSQYB225K10
C	348		CEJQ330M25
C	349		CEJQ330M25
C	353		CKSRYB105K10
C	354		CKSRYB105K10
C	355		CKSRYB105K10
C	356		CKSRYB105K10
C	357		CKSRYB105K10
C	358		CKSRYB105K10
C	361		CEJQ100M50
C	362		CEJQ100M25
C	363		CEJQ100M50
C	364		CEJQ100M25
C	365		CEJQ100M50
C	366		CEJQ100M50
C	367		CKSRYB222K50
C	368		CKSRYB222K50
C	369		CKSRYB222K50
C	370		CKSRYB222K50
C	371		CKSRYB222K50
C	372		CKSRYB222K50
C	373		CEJQ220M25
C	401		CKSRYB103K50
C	402		CKSRYB103K50
C	403		CEJQ470M10
C	404		CKSRYB103K50
C	405		CEJQ101M10
C	408		CCSRCH101J50
C	601		CEJQ4R7M35
C	602		CKSRYB103K50
C	603		CCSRCH180J50
C	605		CCSRCH220J50
C	606		CCSRCH470J50
C	652		CKSRYB105K10
C	702	470μF/10V	CCH1438
C	741		CKSRYB473K50
C	742		CKSRYB102K50
C	743		CEJQ101M16
C	744		CKSRYB473K50
C	745		CEHAR101M10
C	801		CKSRYB473K50
C	821		CKSRYB473K50
C	832		CCSRCH101J50
C	833		CKSRYB473K50
C	834		CKSRYB105K10
C	841		CKSRYB104K25
C	842		CEJQ470M16
C	843		CEJQ101M10
C	844		CKSRYB104K25
C	845		CCSRCH331J50
C	846		CKSRYB103K50
C	847		CEJQ470M25
C	849	4.7μF	CCG1111
C	864		CKSRYB474K10
C	865		CKSRYB103K50
C	866		CEJQ220M6R3
C	867		CKSYB475K10
C	901	470μF/16V	CCH1331
C	902	470μF/16V	CCH1331
C	903		CKSRYB472K50
C	904		CKSRYB103K50
C	905		CEHAR470M16
C	921		CEJQ221M10
C	922		CKSRYB103K50
C	923		CEHAR101M10
C	931		CKSRYB104K25
C	941		CKSQYB105K16

B Unit Number : CWM8713
Unit Name : Keyboard Unit

MISCELLANEOUS

=====Circuit Symbol and No.===Part Name			Part No.
IC	1901	HIC	RS-140
IC	1902	IC	S-818A33AUC-BGN
IC	1940	IC	PD5808A
IC	1980	IC	PD6405A
IC	1981	IC	TC7WH32FU
IC	1990	IC	PD8105A
Q	1960	Transistor	2SC4617
Q	1961	Transistor	2SD1664
Q	1980	Transistor	2SC4154-11
Q	1981	Transistor	IMD2A
Q	1982	Transistor	IMD2A
D	1903	LED	CL190UBX
D	1904	LED	CL190UBX
D	1905	LED	CL-195PG-CD
D	1906	LED	CL-195PG-CD
D	1914	LED	CL-195PG-CD
D	1915	LED	CL-195PG-CD
D	1917	LED	CL-195PG-CD
D	1919	LED	CL-195PG-CD
D	1921	LED	CL-195PG-CD
D	1931	LED	CL-195PG-CD
D	1940	Diode	1SS355
D	1980	Diode	DAN202U
D	1982	Diode	UDZ13(B)
L	1901	Inductor	CTF1530
L	1940	Inductor	CTF1530
TH	1960	Thermistor	CCX1037
X	1940	Radiator 10.0MHz	CSS1577
S	1901	Encoder(VOLUME)	CSD1059
S	1902	Push Switch	CSG1112
S	1903	Push Switch	CSG1112
S	1904	Push Switch	CSG1112
S	1905	Push Switch	CSG1112
S	1906	Push Switch	CSG1111
S	1907	Push Switch	CSG1111
S	1908	Switch	CSG1107
S	1909	Switch	CSG1107
S	1910	Switch	CSG1107
S	1911	Switch	CSG1107
S	1912	Switch	CSG1107
S	1913	Switch	CSG1107
S	1914	Push Switch	CSG1111
S	1915	Push Switch	CSG1111
S	1916	Push Switch	CSG1111
S	1917	Push Switch	CSG1112
S	1918	Push Switch	CSG1160
S	1919	Push Switch	CSG1160
S	1920	Push Switch	CSG1112
S	1921	Push Switch	CSG1112
VR	1970	Semi-fixed 15kΩ(B)	CCP1230
VR	1971	Semi-fixed 20kΩ(B)	CCP1231
		OEL Unit	MXS8045

RESISTORS

R	1901		RS1/16S222J
R	1902		RS1/16S222J
R	1903		RS1/16S473J
R	1905		RS1/16S0R0J
R	1911		RS1/16S103J

Circuit Symbol and No.		Part Name	Part No.
R	1912		RS1/16S822J
R	1913		RS1/16S121J
R	1914		RS1/16S184J
R	1915		RS1/16S2R2J
R	1916		RS1/16S560J
R	1918		RS1/16S181J
R	1920		RS1/16S560J
R	1922		RS1/16S181J
R	1924		RS1/16S560J
R	1926		RS1/16S560J
R	1928		RS1/16S121J
R	1929		RS1/16S121J
R	1930		RS1/16S680J
R	1932		RS1/16S181J
R	1933		RS1/16S181J
R	1940		RS1/16S222J
R	1941		RS1/16S101J
R	1942		RAB4C101J
R	1943		RAB4C101J
R	1944		RAB4C101J
R	1945		RAB4C101J
R	1946		RAB4C101J
R	1947		RAB4C101J
R	1948		RAB4C101J
R	1949		RAB4C101J
R	1950		RAB4C101J
R	1952		RS1/16S101J
R	1953		RS1/16S101J
R	1954		RAB4C473J
R	1955		RS1/16S473J
R	1956		RS1/16S103J
R	1957		RAB4C101J
R	1958		RS1/16S473J
R	1959		RS1/16S154J
R	1960		RS1/16S223J
R	1961		RS1/16S683J
R	1962		RS1/16S392J
R	1963		RS1/16S393J
R	1980		RS1/16S473J
R	1981		RS1/16S473J
R	1982		RS1/16S473J
R	1983		RS1/16S102J
R	1985		RS1/16S0R0J
R	1991		RS1/16S101J
R	1992		RS1/16S101J
R	1993		RS1/16S101J
R	1994		RS1/16S101J
R	1996		RS1/16S332J
R	1997		RS1/16S222J
R	1998		RS1/16S102J
R	1999		RS1/16S102J
R	2000		RAB4C102J

CAPACITORS

Circuit Symbol and No.		Part Name	Part No.
C	1906		CKSRYB104K25
C	1907		CKSRYB104K25
C	1908		CKSYF106Z10
C	1909		CSZSR4R7M16
C	1910		CSZSR4R7M10
C	1940		CKSRYB103K50
C	1941		CKSRYB473K50
C	1942		CKSRYB105K10
C	1943		CKSRYB103K50
C	1944		CSZSR4R7M10
C	1972		CKSRYB104K25
C	1973		CKSRYB104K25
C	1974		CKSRYB104K25
C	1975		CKSRYB104K25
C	1976		CKSRYB104K25
C	1981		CKSRYB103K50
C	1983		CKSRYB103K50
C	1984		CSZSR4R7M16
C	1990		CKSRYB103K50
C	1991		CKSRYB104K25
C	1992		CKSRYB104K25

D Unit Number : CWM8758
Unit Name : Panel Unit

MISCELLANEOUS

Circuit Symbol and No.		Part Name	Part No.
D	1970	LED	CL220PGC
S	1970	Push Switch(EJECT)	CSG1112

RESISTORS

Circuit Symbol and No.		Part Name	Part No.
R	1970		RS1/16S101J
R	1971		RS1/16S101J
R	1972		RS1/16S0R0J

CAPACITORS

Circuit Symbol and No.		Part Name	Part No.
C	1970		CKSRYB104K16

C Unit Number : CWX2792
Unit Name : CD Core Unit(S10MP3)

MISCELLANEOUS

Circuit Symbol and No.		Part Name	Part No.
IC	201	IC	UPD63760GJ
IC	202	IC	MSM51V4265EP-70TS
IC	203	IC	BA033SFP
IC	301	IC	BA5996FM
IC	501	IC	UPD61002GC
IC	502	IC	BA25BC0WFP
IC	701	IC	PE5385A
IC	702	IC	TC74VHCT08AFT
IC	703	IC	S-818A33AUC-BGN
Q	101	Transistor	2SB1132
Q	601	Transistor	DTC323TK
Q	602	Transistor	DTC323TK
Q	603	Transistor	2SB709A
Q	701	Transistor	UN2111
D	101	Diode	1SS355
D	201	Diode	1SR154-400
D	501	Diode	1SR154-400
D	601	Diode	MA152WA
L	201	Inductor	CTF1386
L	202	Inductor	CTF1386
L	204	Inductor	CTF1386
L	205	Inductor	CTF1386
L	206	Inductor	CTF1386
L	207	Inductor	CTF1386
L	208	Inductor	CTF1386
L	209	Inductor	CTF1386
L	211	Inductor	CTF1386
L	212	Inductor	CTF1386
L	501	Inductor	CTF1386
L	502	Inductor	CTF1386
L	503	Inductor	CTF1386
L	701	Inductor	CTF1386
L	702	Inductor	LCYBR22J1608
L	703	Inductor	CTF1386
L	704	Inductor	CTF1386
X	201	Ceramic Resonator 16.934MHz	CSS1603
X	202	Ceramic Resonator 24.57MHz	CSS1615
X	702	Resonator 16.000MHz	CSS1627
S	901	Switch(HOME)	CSN1051
S	902	Switch(CLAMP)	CSN1051

=====Circuit Symbol and No.===Part Name			Part No.
S	903	Spring Switch(DSCSNS)	CSN1052
S	904	Switch(12EJ)	CSN1051
S	905	Switch(8EJ)	CSN1051

RESISTORS

			Part No.
R	101		RS1/10S1R5J
R	102		RS1/10S1R5J
R	103		RS1/10S1R5J
R	104		RS1/10S1R5J
R	105		RS1/10S1R5J
R	201		RS1/16SS102J
R	202		RS1/16SS333J
R	203		RS1/16SS333J
R	204		RS1/16SS333J
R	206		RS1/16SS0R0J
R	208		RS1/16SS0R0J
R	210		RS1/16SS0R0J
R	212		RS1/16SS221J
R	213		RS1/16SS1002D
R	214		RS1/16SS1002D
R	215		RS1/16SS6801D
R	216		RS1/16SS6801D
R	217		RS1/16SS1002D
R	218		RS1/16SS1002D
R	219		RS1/16SS1002D
R	220		RS1/16SS1002D
R	221		RS1/16SS103J
R	222		RS1/16SS103J
R	223		RS1/16SS103J
R	224		RS1/16SS103J
R	225		RS1/16SS103J
R	226		RS1/16SS393J
R	227		RS1/16SS103J
R	228		RS1/16SS182J
R	229		RS1/16SS103J
R	231		RS1/16SS0R0J
R	232		RS1/16SS182J
R	233		RS1/16SS0R0J
R	237		RS1/16SS104J
R	238		RS1/16SS473J
R	240		RS1/16SS0R0J
R	241		RS1/16SS221J
R	301		RS1/16SS183J
R	302		RS1/16SS822J
R	303		RS1/16SS0R0J
R	304		RS1/16SS183J
R	305		RS1/16SS822J
R	306		RS1/16SS0R0J
R	307		RS1/16SS183J
R	308		RS1/16SS822J
R	309		RS1/16SS183J
R	310		RS1/16SS822J
R	311		RS1/16SS0R0J
R	501		RS1/16SS221J
R	502		RS1/16SS221J
R	503		RS1/16SS221J
R	504		RAB4CQ223J
R	505		RAB4CQ223J
R	506		RAB4CQ223J
R	507		RS1/16SS223J
R	508		RS1/16SS223J
R	509		RS1/16SS102J
R	510		RS1/16SS223J
R	511		RS1/16SS223J
R	512		RS1/16SS223J
R	601		RS1/16S101J
R	602		RS1/16S101J
R	603		RS1/16S223J
R	604		RS1/16S223J
R	605		RS1/16SS103J

=====Circuit Symbol and No.===Part Name			Part No.
R	707		RS1/16SS0R0J
R	708		RS1/16SS102J
R	709		RS1/16SS102J
R	710		RS1/16SS102J
R	711		RS1/16SS102J
R	712		RS1/16SS102J
R	713		RS1/16SS102J
R	714		RS1/16SS473J
R	715		RAB4CQ221J
R	716		RAB4CQ221J
R	717		RAB4CQ221J
R	718		RAB4CQ221J
R	719		RAB4CQ221J
R	720		RS1/16SS471J
R	721		RS1/16SS471J
R	722		RAB4CQ221J
R	723		RS1/16SS102J
R	724		RS1/16S473J
R	725		RS1/16SS222J
R	726		RS1/16SS103J
R	727		RS1/16SS473J
R	728		RS1/16SS473J
R	729		RS1/16SS223J
R	730		RS1/16SS473J
R	731		RS1/16SS104J
R	732		RS1/16SS104J
R	733		RS1/16SS104J
R	737		RAB4CQ473J
R	739		RAB4CQ473J
R	740		RS1/16SS473J
R	741		RS1/16SS104J
R	742		RS1/16SS104J
R	745		RS1/16SS473J
R	747		RS1/16SS104J
R	748		RS1/16SS104J
R	751		RS1/16SS221J
R	752		RS1/16SS221J
R	754		RS1/16SS102J
R	755		RS1/16SS102J
R	756		RS1/16SS104J
R	757		RS1/16SS104J
R	801		RS1/16SS104J
R	802		RS1/16SS473J
R	803		RS1/16SS273J
R	901		RS1/16SS221J
R	902		RS1/16SS221J
R	903		RS1/16SS221J
R	904		RS1/16SS221J
R	905		RS1/16SS221J
R	906		RS1/16SS221J

CAPACITORS

			Part No.
C	101		CKSSYB104K10
C	102		CKSSYB104K10
C	103		CEV101M16
C	104		CEV101M4
C	105		CKSSYB104K10
C	106		CCSRCH101J50
C	108		CKSSYB104K10
C	109		CEV100M16
C	201		CKSSYB471K50
C	202		CKSSYB104K10
C	203		CKSSYB104K10
C	204		CEV220M6R3
C	205		CKSSYB103K16
C	206		CKSSYB103K16
C	207		CEV221M4

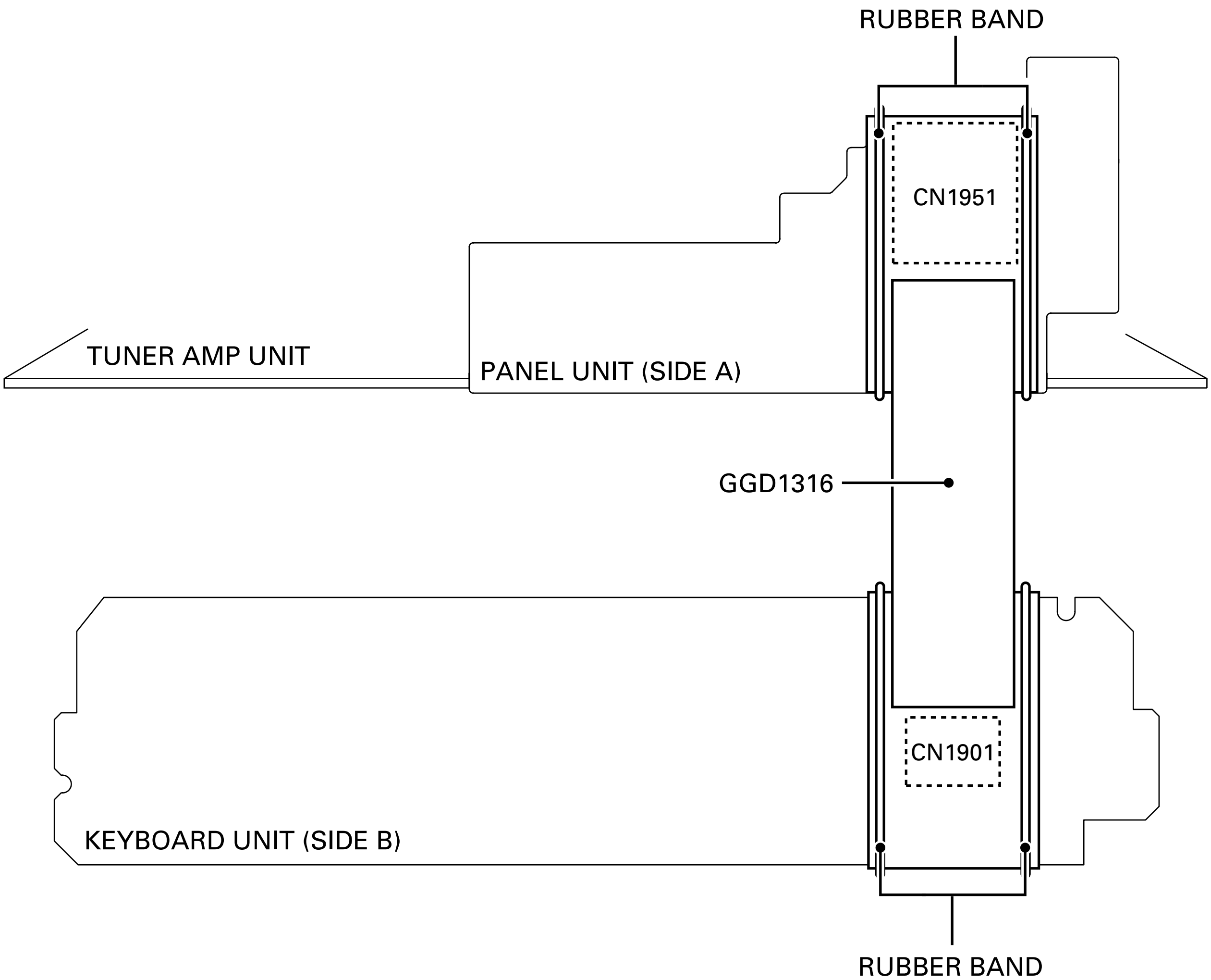
=====Circuit Symbol and No.===Part Name			Part No.
C	208		CKSSYB104K10
C	209		CKSSYB104K10
C	210		CKSSYB104K10
C	211		CKSSYB104K10
C	216		CKSSYB332K50
C	217		CKSSYB104K10
C	218		CKSSYB223K16
C	219		CKSSYB104K10
C	220		CKSSYB103K16
C	221		CKSSYB104K10
C	222		CCSSCH270J50
C	223		CCSSCJ3R0C50
C	224		CKSSYB104K10
C	225		CKSSYB103K16
C	226		CCSSCH680J50
C	227		CCSSCH470J50
C	228		CKSSYB682K25
C	230		CKSSYB104K10
C	232		CKSSYB104K10
C	233	47μF/6.3V	CCH1436
C	234		CEV221M4
C	235		CKSRYB224K16
C	237		CKSSYB104K10
C	238		CKSSYB104K10
C	239		CCSSCH9R0D50
C	242		CKSSYB104K10
C	243		CKSSYB104K10
C	245		CKSSYB104K10
C	246		CKSSYB104K10
C	301		CKSSYB331K50
C	302		CKSSYB331K50
C	303		CKSSYB472K25
C	304		CKSSYB472K25
C	305		CEV101M16
C	306		CKSRYB224K16
C	501		CKSSYB104K10
C	502		CKSSYB471K50
C	503		CKSSYB104K10
C	504	47μF/6.3V	CCH1436
C	505		CKSRYB224K16
C	506		CKSSYB104K10
C	508		CKSSYB104K10
C	509		CKSSYB104K10
C	510		CKSSYB104K10
C	511		CKSSYB104K10
C	601		CCSRCH102J50
C	602		CCSRCH102J50
C	603	4.7μF/25V	CCH1508
C	604	4.7μF/25V	CCH1508
C	701		CKSSYB104K10
C	702		CKSSYB471K50
C	703		CKSSYB103K16
C	704		CEV1R0M50
C	705		CKSSYB104K10
C	706		CKSSYB471K50
C	707		CKSSYB104K10
C	708		CKSSYB104K10
C	710		CKSSYB104K10
C	711	10μF/10V	CCH1349
C	712		CKSRYB224K16
C	713		CKSSYB104K10
C	714		CKSSYB104K10
C	715		CKSSYB103K16
C	716		CKSSYB103K16
C	717		CCSSCH8R0D50
C	718		CCSSCH8R0D50
C	901		CKSSYB104K10
C	903		CCSRCH101J50

Miscellaneous Parts List

=====Circuit Symbol and No.===Part Name			Part No.
		Pickup Unit(Service)(P10)	CXX1641
M	1	Motor Unit(SPINDLE)	CXB6007
M	2	Motor Unit(LOADING/CARRIAGE)	CXB8933

6. ADJUSTMENT

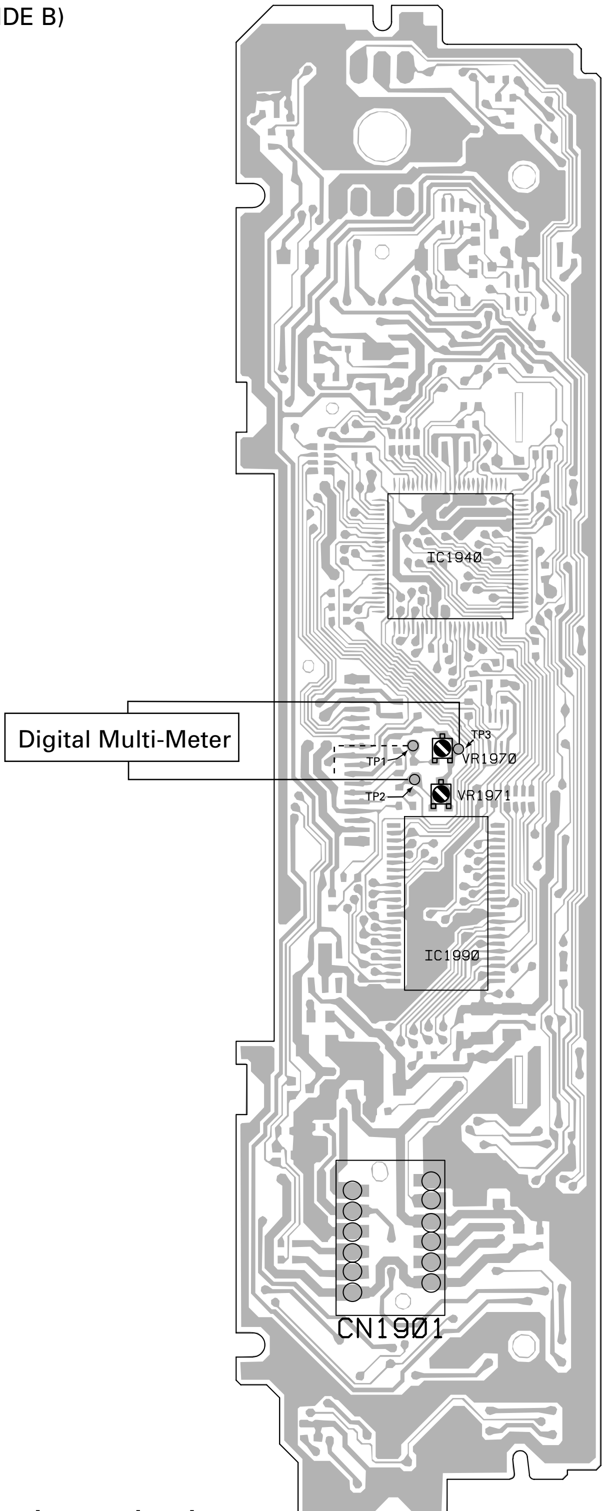
6.1 JIG CONNECTION DIAGRAM



6.2 OEL UNIT ADJUSTMENT

● Adjustment point

KEYBOARD UNIT (SIDE B)



<When the OEL Unit has been replaced>

1. Use VR1970 to adjust the resistance between TP1 and TP3 to 5.5 kΩ.
2. Use VR1971 to adjust the resistance between TP2 and TP3 to 12 kΩ.

6.3 SYSTEM MICROCOMPUTER TEST PROGRAM

● PCL output

In the normal operation mode (the ACC switched ON, the standby mode cancelled), shift the TESTIN terminal to H. The clock signal is output from the PCL terminal (Pin 37). The frequency of the clock signal is 312.5kHz that is one 32nd of the fundamental frequency.

6.4 CD ADJUSTMENT

1) Cautions on adjustments

• In this product the single voltage (3.3V) is used for the regulator. The reference voltage is the REFO1 (1.65V) instead of the GND.
If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:
a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.
b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.
c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

• Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

• For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

• In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

• The RFI and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

• The load and eject operation is not guarantied with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode

This mode is used to adjust the CD mechanism module.

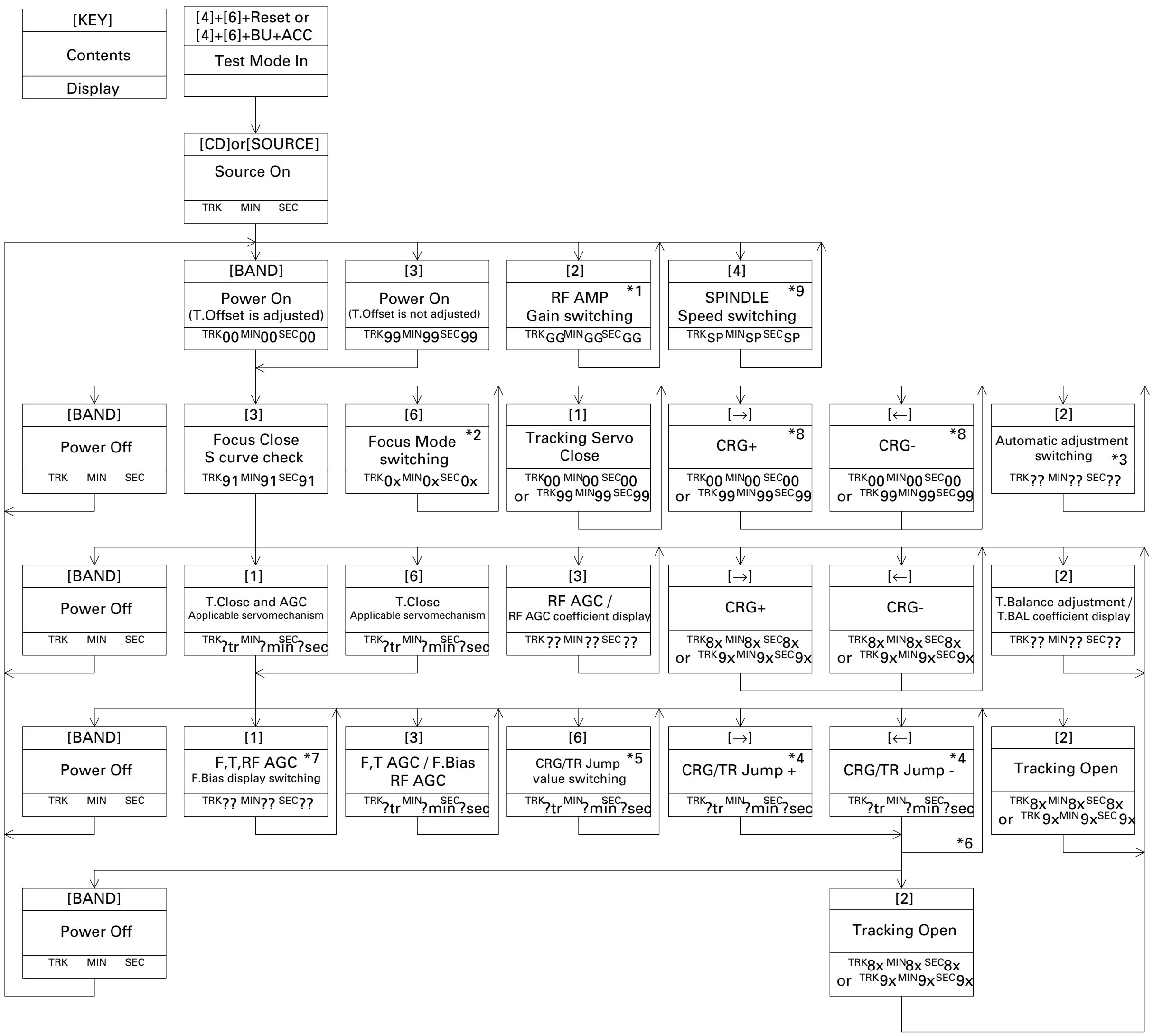
• To enter the test mode.
While pressing the 4 and 6 keys at the same time, reset.

• To exit from the test mode.
Turn off the ACC and back up.

Notes:

a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.
b. If you have pressed the (→) key or (←) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.
c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.
d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.
e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0dB, and the auto-adjustment values are reset to the default settings.

● Flow Chart



*1) TYP (TRK MIN SEC) → -6dB (TRK 06 MIN 06 SEC 06) → -12dB (TRK 12 MIN 12 SEC 12) ↺

*2) Focus Close (TRK 00 MIN 00 SEC 00 (TRK 99 MIN 99 SEC 99)) → S.Curve check setting (TRK 01 MIN 01 SEC 01) → F EQ measurement setting (TRK 02 MIN 02 SEC 02) ↺

*3) F.Offset Display → T.Offset Display → Switch to the order of the original display ↺

*4) 1TR / 32TR / 100TR

*5) Single TR → 32TR → 100TR → CRG Move
9x(8x) : 91(81) 92(82) 93(83) 94(84)

*6) Only at the time of CRG move, 100TR jump

*7) TRK/MIN/SEC → F.AGC → T.AGC → F Bias → RF AGC ↺

*8) CRG motor voltage = 2[V]

*9) Applicability : A, B, C, D, E, F
TYP(1X) (TRK MIN SEC) → 2X (TRK 22 MIN 22 SEC 22) → 1X (TRK 11 MIN 11 SEC 11) ↺

As for the double speed (2x), audio output cannot be supported

Applicability : G
TYP(2X) (TRK MIN SEC) → 1X (TRK 11 MIN 11 SEC 11) → 2X (TRK 22 MIN 22 SEC 22) ↺

[Key]	Operation Test Mode
[BAND]	Power On / Off
[→]	CRG + / TR Jump + (Direction of the external surface)
[←]	CRG - / TR Jump - (Direction of the internal surface)
[1]	U.CLS and AGC and Applicable servomechanism / AGC, AGC display setting
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T.Open
[3]	Close, S.Curve / Rough Servo and RF AGC / F, T, RF AGC
[4]	SPDL 1X / 2X switching As for the double speed (2x), audio output cannot be supported.
[5]	Error Rate measurement — 1st - ON : ERR count Beginning (30Sec) 2nd - ON : BER display data [%]
[6]	F.Mode switching / Tracking Close / CRG • TR Jump switching

6.5 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

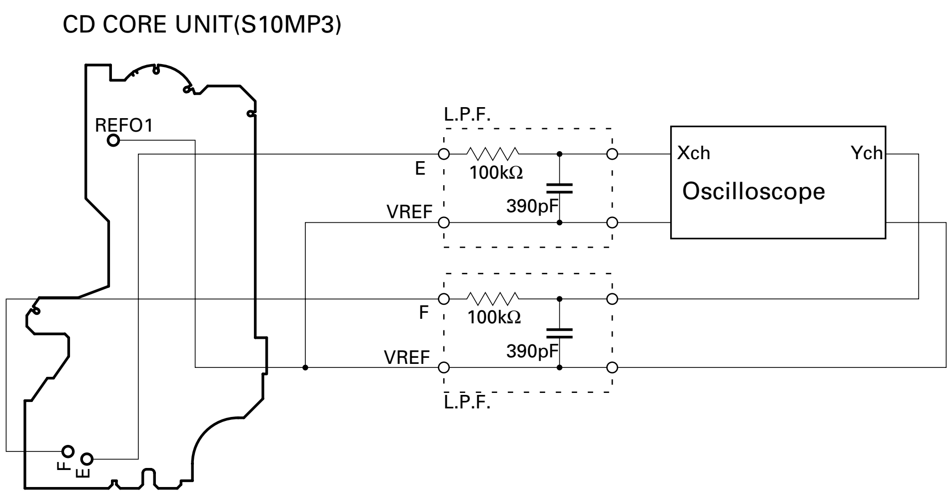
• Note :
The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

• Purpose :
To check that the grating is within an acceptable range when the PU unit is changed.

• Symptoms of Mal-adjustment :
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

• Method :

• Measuring Equipment	• Oscilloscope, Two L.P.F.
• Measuring Points	• E, F, REFO1
• Disc	• ABEX TCD-782
• Mode	• TEST MODE



• Checking Procedure
1. In test mode, load the disc and switch the 3V regulator on.
2. Using the → and ← buttons, move the PU unit to the innermost track.
3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

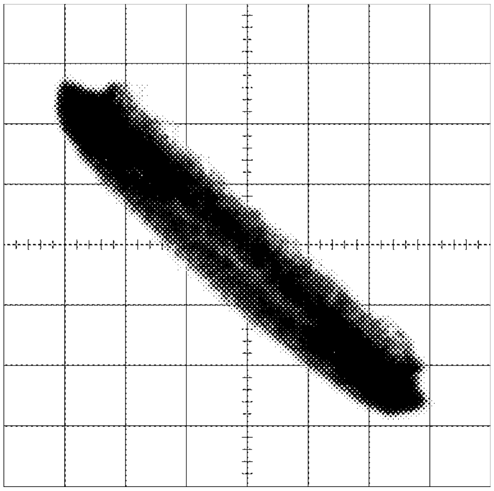
• Note
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• Hint
Reloading the disc changes the clamp position and may decrease the "wobble".

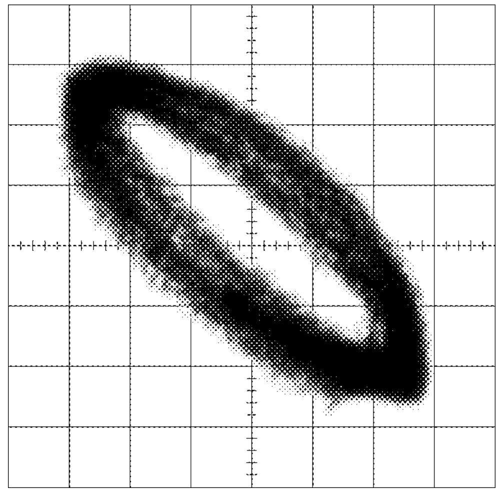
Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC

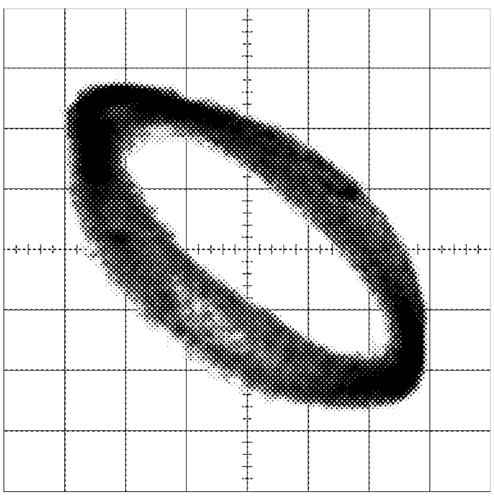
0°



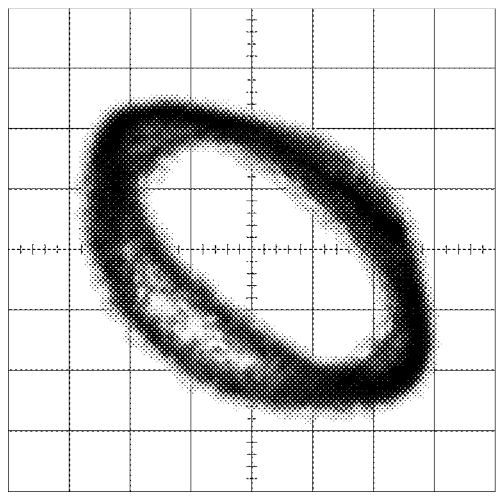
30°



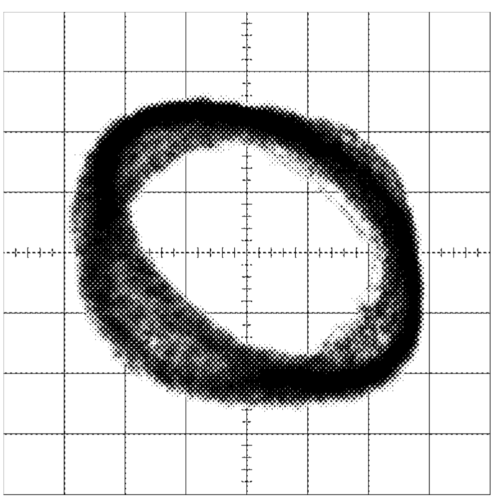
45°



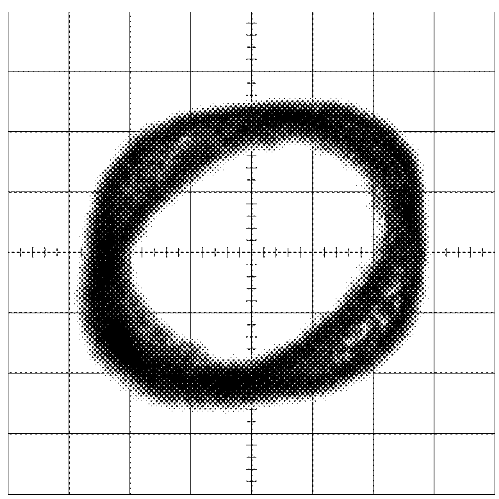
60°



75°



90°



6.6 ERROR MODE

● Error Messages

Error is displayed with number for Error cause when CD is inoperative or stops with Error during operation.
The purpose is to reduce nonsense calls from users as well as to assist all related analysis and repair for defects at service station.

(1) Basic Display Method

1) When CSMOD (CD mode area for system) is SERRORM, Error code will be written in DMIN (minutes area for display), DSEC (seconds area for display). The same data shall be written in DMIN and DSEC. DTNO is blank as usual.

2) Display Example of Head Unit

The following is about LCD display ability. xx is Error number.

8 digits	6 digits	4 digits
ERROR–xx	ERR–xx OR Err–xx	E–xx

(2) Error Code List

No.	Classification	Contents	Details • Cause
10	Electricity	Carriage Home NG	CRG can't move to the inner. CRG can't move from the inner. → HOME SW failure, CRG movement failure.
11	Electricity	Focus Search NG	Focus can't be caught. → Back of Disc / Severe dirt and vibration.
12	Electricity	Spindle Lock NG Subcode NG RF-amp NG	Not spindle, lock. Wrong subcode (can't read). → Defective Spindle. Scratch and dirt on Disc. Intense vibration. The appropriate gain of the RF amp cannot be obtained. → Defective spindle. → Scratched or dirty disc. Severe vibration. Abnormal CD signals. → Blanc CD-R disc. Disc inserted upside down.
17	Electricity	Setup NG	AGC protection doesn't work, out of Focus soon. → Scratch on Disc/Severe dirt and vibration.
22	Disc	Impossible to play	There is no playable MP3 or WMA file present in a disc. → No MP3 or WMA file exists in a CD-ROM disc inserted.
23	Disc	File Format NG	Contents are stored in an incompatible file format. → The contents in a CD-ROM disc inserted are recorded in a file format other than ISO9660 Level-1 and 2.
30	Electricity	Search Time Out	Can't reach the target address. → Defective CRG/tracking, or scratch on Disc.
44	Disc	Impossible to play	There is no playable TRK No. present in a disc. → All TRK Nos. In a disc inserted are specified as a track which should be skipped, in the track skip information.
50	Mecha	Disc Load / Eject NG	Disc loading/ejection cannot be complete. → Foreign objects entered into the mechanism. Disc caught in between during loading/ejection.
A0	System	Power NG	Power supply (VD) isn't connected to the ground. → Defective SW transistor. Abnormal power (failed connector)

Note : Error doesn't display in mechanism only. (CD off causes mechanism off)
If TOC can't be read, error wouldn't occur, but mechanism still continues its operation.
The upper digits of error code is mainly classified by 3 kinds as follows:
1x: Setup related error, 3x: Search related error, Ax: Other errors.

6.7 OEL SCREENSAVER STUDIO IKA TO LKD APPLICATION :GGV1131

"OEL Screensaver Studio" is an application to create OEL display image file. The customer write the image file on a CD-R disc and install it to car audio. This function is similar to PC link-kit (CD-PC1).
"OEL Screensaver Studio" is available to the public on the PIONEER Home Page.
This software (GGV1131) is added LKA to LKD file conversion function to original "OEL Screensaver Studio".

● **How to check:**

1. Set up GGV1131 application.
2. Confirm the LKA file (ent_disp.lka) is converted to LKD file correctly or not.

Please see a Readme.txt in the GGV1131 or help file of "OEL Screensaver Studio" for more information.

7. GENERAL INFORMATION
7.1 DIAGNOSIS
7.1.1 DISASSEMBLY

● Removing the Case (not shown)

1. Remove the Case.

● Removing the CD Mechanism Module (Fig.1)

1 Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

● Removing the Grille Assy (Fig.1)

2 Remove the two screws and then remove the Grille Assy.

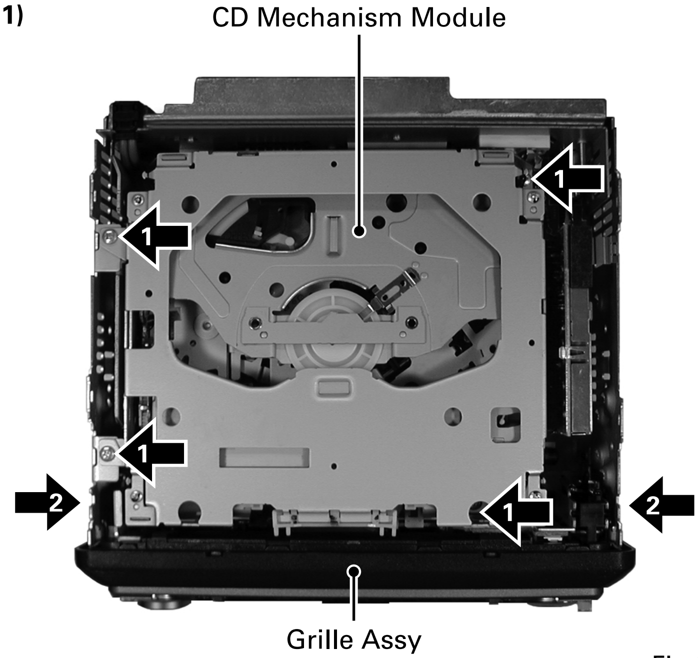


Fig.1

● Removing the Tuner Amp Unit (Fig.2)

1 Remove the screw.

2 Remove the three screws.

3 Straighten the tabs at three locations indicated.

4 Remove the screw and then remove the Tuner Amp Unit.

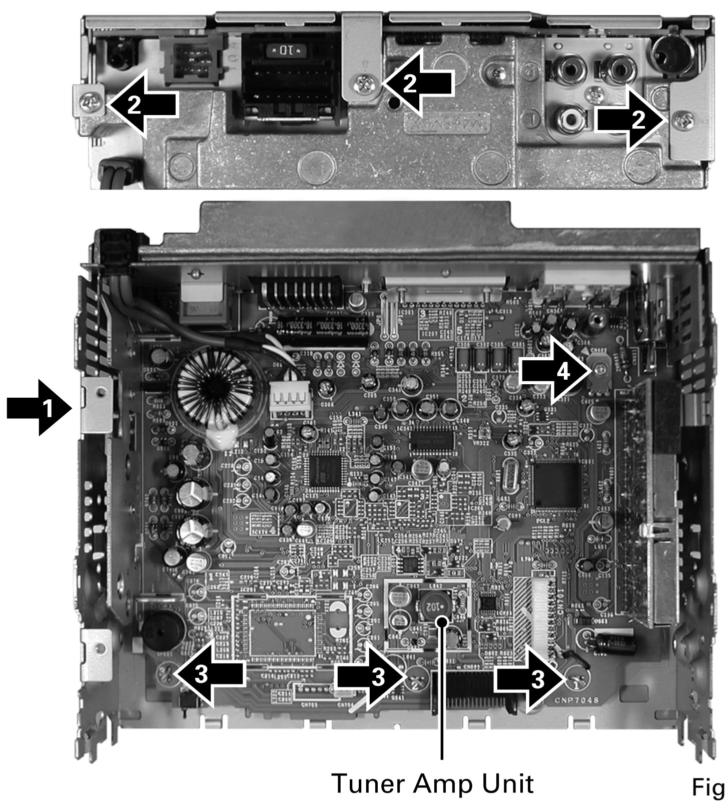
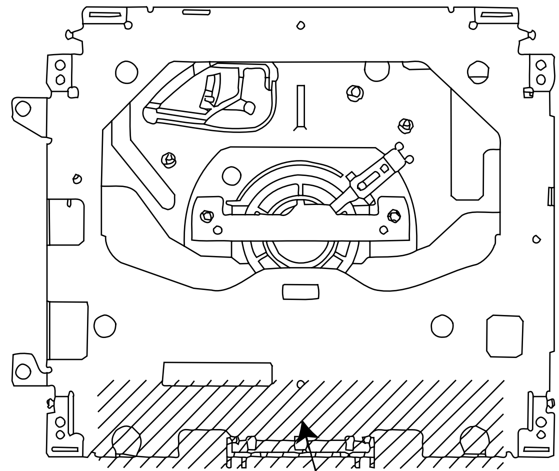


Fig.2

● How to hold the Mechanism Unit

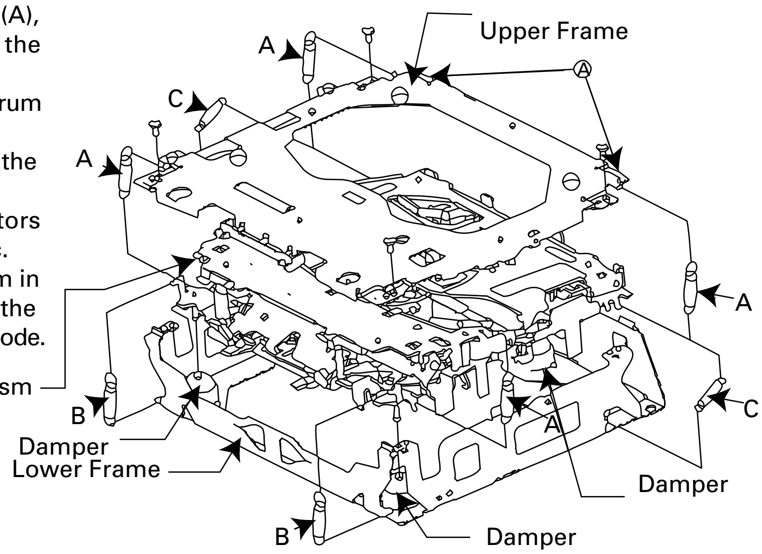
1. Hold the top and bottom frame.
2. Do not squeeze top frame's front portion too tight, because it is fragile.



● Removing the Upper and Lower Frames

1. With a disc clamped, remove the four springs (A), the two springs (B), the two springs (C), and the four screws.
2. To remove the upper frame, open it on the fulcrum A.
3. While lifting the carriage mechanism, remove the three dampers.
4. With the frames removed, insert the connectors coming from the main unit and eject the disc.

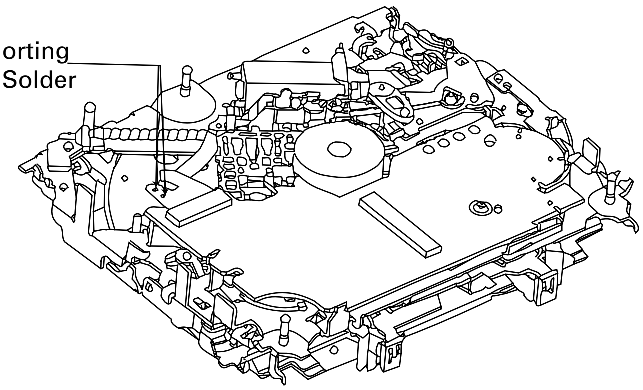
Caution: Before installing the carriage mechanism in the frames, be sure to apply some alcohol to the dampers and set the mechanism to the clamp mode.

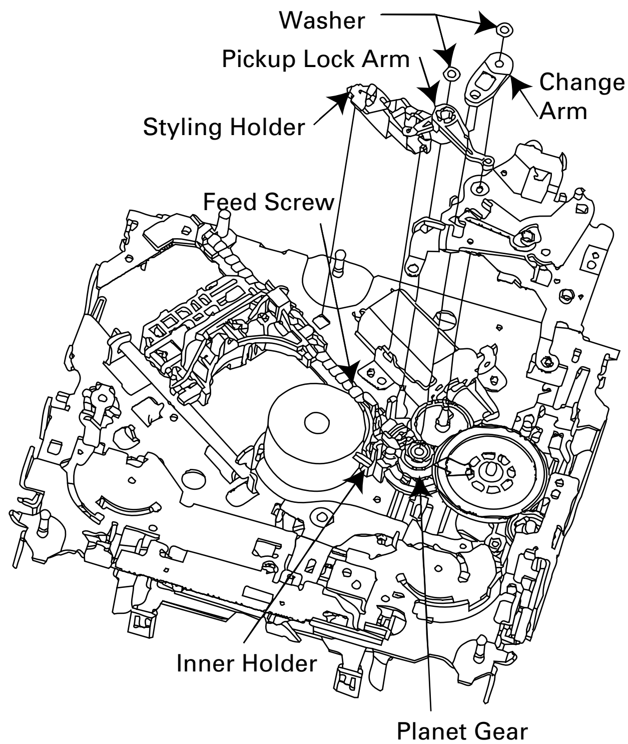


● Removing the Pickup Unit

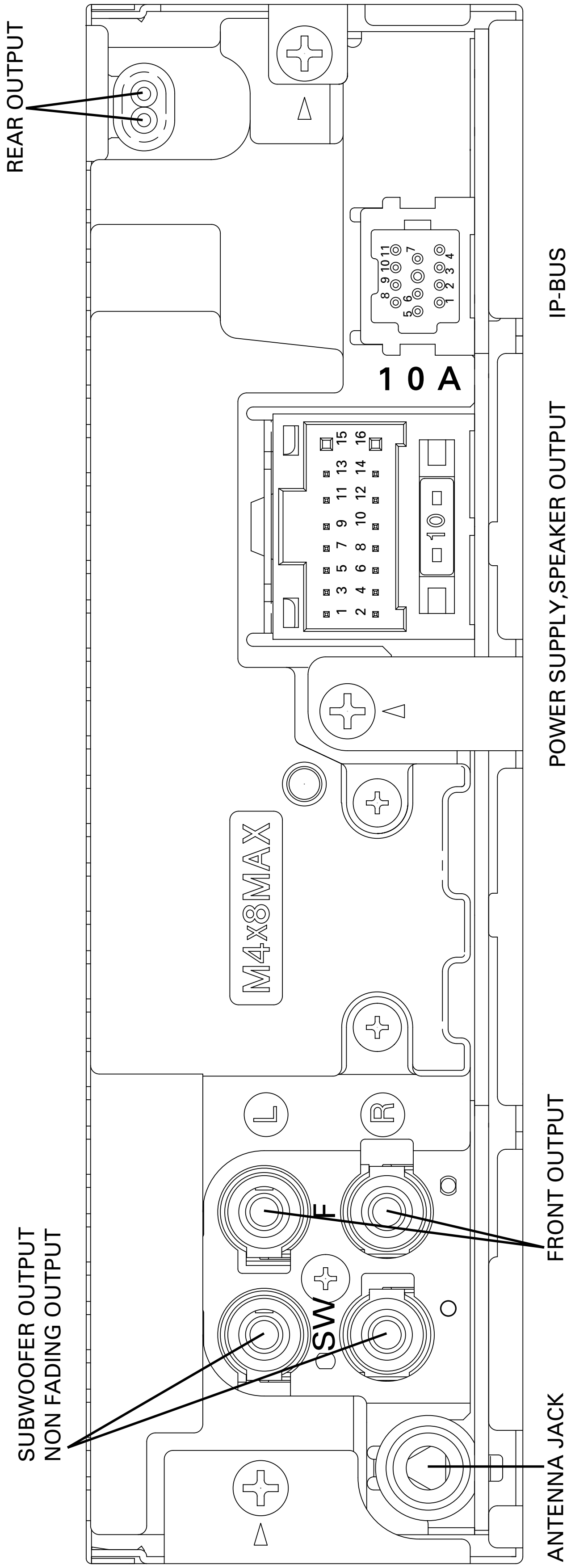
1. Apply shorting solder to the Pickup flexible cable. Disconnect the cable.
2. Set the mechanism to the clamp mode.
3. Remove the lead wires from the inner holder.
4. Remove the two washers, styling holder, change arm, and pickup lock arm.
5. While releasing from the hook of the inner holder, lift the end of the feed screw.

Caution: In assembling, move the planet gear to the load/eject position before setting the feed screw in the inner holder.





7.1.2 CONNECTOR FUNCTION DESCRIPTION



IP-BUS

1. BUS+
2. GND
3. GND
4. NC
5. BUS-
6. GND
7. BUS L+ INPUT
8. ASENB
9. BUS R+ INPUT
10. BUS R- INPUT
11. BUS L- INPUT

POWER SUPPLY,SPEAKER OUTPUT

1. FR+
2. RR+
3. FR-
4. RR-
5. FL+
6. RL+
7. FL-
8. RL-
9. TEL MUTE
10. NC
11. B.REM
12. ILM
13. NC
14. ACC
15. GND
16. BACK UP

7.2 IC

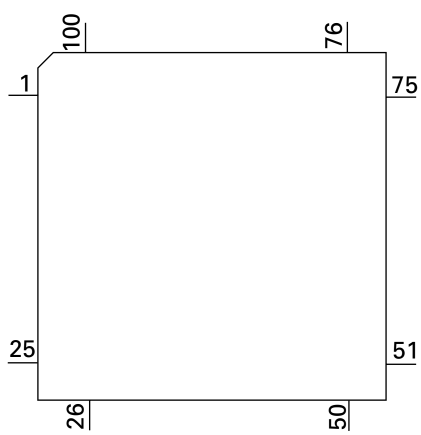
PD5804A	PD8105A	UPD61002GC
TC74VHCT125AFT	TC7WH32FU	MSM51V4265EP-70TS
BD4835G	PD6405A	UPD63760GJ
PD5808A	PE5385A	

● Pin Functions (PD5804A)

Pin No.	Pin Name	I/O	Function and Operation
1	SYSPW	O	System power supply control output
2	DORAON	O	Tuner : Power supply control output
3-5	NC		Not used
6	BYTE		Connect to GND
7	CNVSS		GND
8	TELIN	I	TEL mute signal input
9	NC		Not used
10	$\overline{RESET}$	I	Reset input
11	XOUT		Crystal oscillating element connection pin
12	VSS1		GND
13	XIN		Crystal oscillating element connection pin
14	VDD1		Power supply
15	$\overline{NMI}$		Not used
16	NC		Not used
17	NC		Not used
18	NC		Not used
19	RX2	I	IP-BUS : Data input 2
20	OELPW	O	OEL power supply control output
21	NC		Not used
22	PEE	O	Beep tone output
23	NC		Not used
24	$\overline{BRST}$	O	P-BUS : Reset output
25	$\overline{BRXEN}$	I/O	P-BUS : Reception enable input/output
26	$\overline{BSRQ}$	I	P-BUS : Service request input
27	RX	I	IP-BUS : Data input
28	TX	O	IP-BUS : Data output
29	BSO	O	P-BUS : Serial data output
30	BSI	I	P-BUS : Serial data input
31	BSCK	O	P-BUS : Serial clock output
32	NC		Not used
33	DPDT	O	Display data output
34	KYDT	I	Key data input
35	ROT1	I	Rotary encoder pulse input 1
36	ROT0	I	Rotary encoder pulse input 0
37	PCL	O	Clock adjustment output
38	SWVDD	O	Keyboard unit power supply control output
39	$\overline{DSENS}$	I	Grille detach sense input
40	FLPILM	O	Inside of flap illumination output
41	ILMPW	O	Illumination power supply control output
42	EJTIN	I	Eject input
43	$\overline{GDTC1}$	O	Picture rewriting output 1
44-46	NC	I	Not used
47	$\overline{GDTC2}$	O	Picture rewriting output 2
48-54	NC		Not used
55	RECIVE	O	Not used
56	CENSOUT	O	Flap close sense output
57	EMUTE	O	Not used
58,59	NC		Not used
60	VCC		Power supply terminal
61	NC		Not used

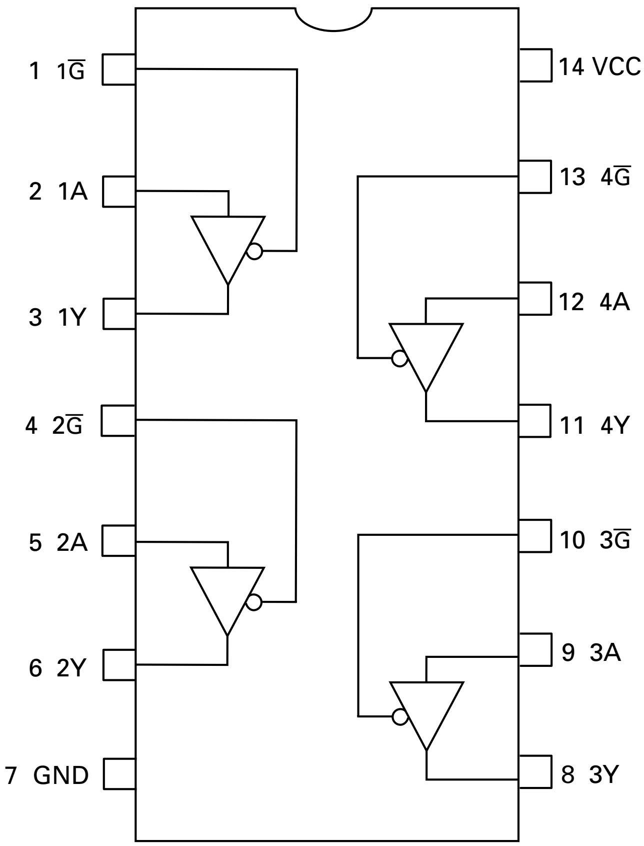
Pin No.	Pin Name	I/O	Function and Operation
62	VSS		GND
63–66	NC		Not used
67	DALMON	O	Consumption current reduction output
68	NC		Not used
69	$\overline{\text{TUNPCE2}}$	O	Tuner : PLL IC chip enable output2
70	TUNPCE1	O	Tuner : PLL IC chip enable output
71	ROMCS	O	ROM correction chip select output
72	ASENS	I	ACC power sense input
73	BSENS	I	Back up power sense input
74	ROMCK	O	ROM correction clock output
75	ROMDATA	I/O	ROM correction data input/output
76	VST	O	Electronic volume : Strobe pulse output
77	VDT	O	Electronic volume : Data output
78	VCK	O	Electronic volume : Clock output
79	IPPW	O	IP-BUS : Power supply control output for IP BUS interface IC
80	ASENBO	O	IP-BUS : Slave power supply control output
81	$\overline{\text{ISENS}}$	I	Illumination sense input
82,83	MODEL1,0	I	Model select input 1,2
84	NC		Not used
85	MUTE	O	Mute output
86	TESTIN	I	Test program input
87,88	NC		Not used
89	SYSPW2	O	System power supply control output
90	LVLINR	I	Level indicator Rch input
91	CSENS	I	Flap open / close sense input
92	LVLINL	I	Level indicator Lch input
93	ASLIN	I	ASL input
94	AVSS		A/D converter GND
95	SL	I	Tuner : Signal level input
96	VREF		A/D converter reference voltage
97	AVCC		A/D converter power supply terminal
98	TUNPDI	I	Tuner : PLL IC data input
99	TUNPDO	O	Tuner : PLL IC data output
100	TUNPCK	O	Tuner : PLL IC clock output

* PD5804A

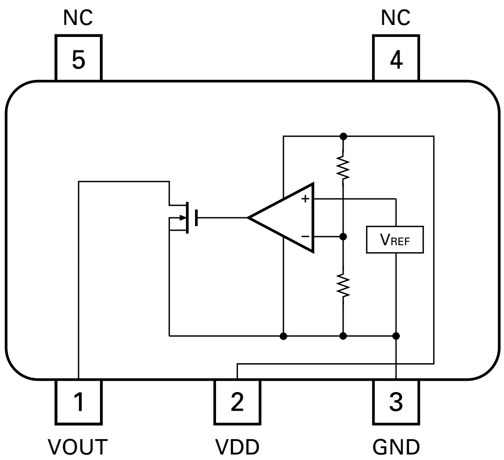


IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

* TC74VHCT125AFT



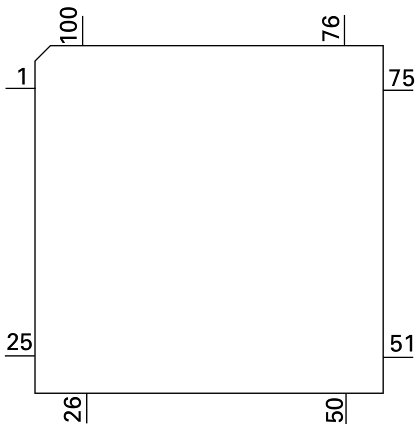
* BD4835G



● Pin Functions (PD5808A)

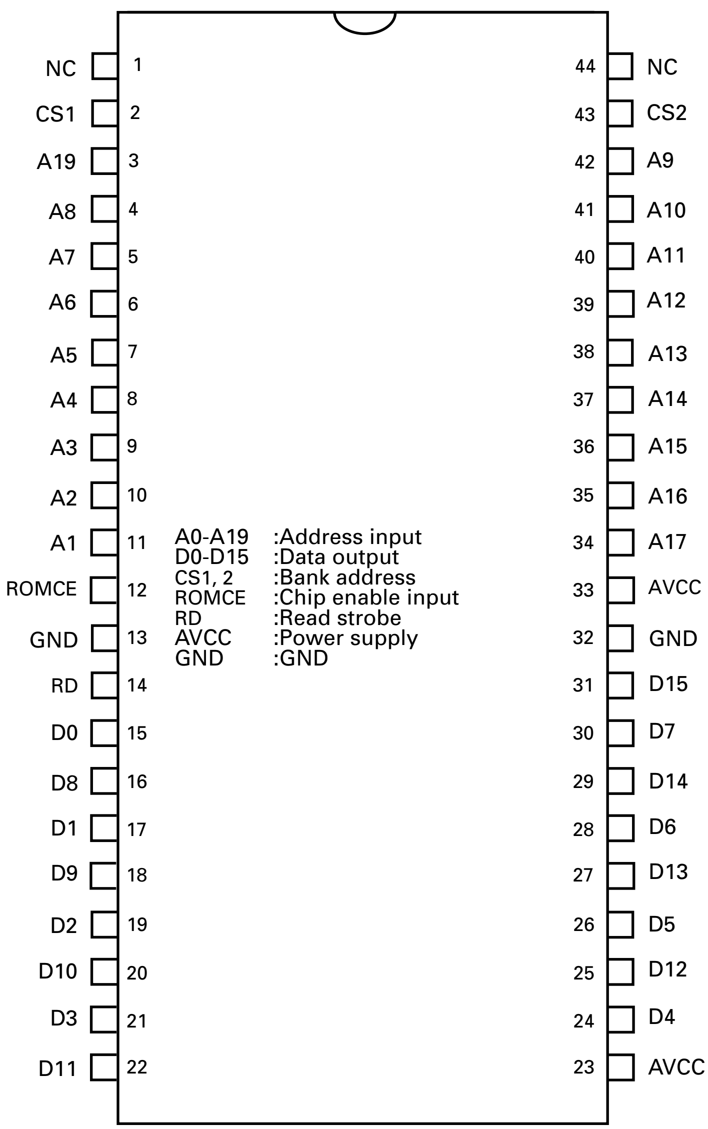
Pin No.	Pin Name	I/O	Format	Function and Operation
1-4	NC			Not used OPEN
5	REM	I		Remote control reception
6	BYTE	I		GND connection
7	CNVSS	I		GND connection
8, 9	NC			Not used OPEN
10	RESET	I		Pull up
11	XOUT	O		Crystal oscillating element connection pin
12	VSS1			GND connection
13	XIN	I		Crystal oscillating element connection pin
14	VDD1			VDD connection
15	NMI	I		Pull up
16-19	KD1-4	I		Key data 1-4
20	CKC	O	C	Cathode driver pulse
21	NC			Not used OPEN
22	CKA	O	C	Anode driver pulse
23	NC			Not used OPEN
24	LS	O	C	Line synchronous signal
25	NC			Not used OPEN
26	CKD	O	C	Data transfer and driver clock
27	DPDT	I		Display data communication
28	KYDT	O	N	Key data communication
29	DA2	O	C	Display data MSB
30	NC			Not used
31	CLK1	I		UART1 clock input
32	ILMD	O	C	Dual illumination
33	DA1	O	C	Display data LSB
34	NC			Not used
35	CLK0	I		UART0 clock input
36	NC	O		Not used OPEN
37	RDY	I		Not used Pull up
38	NC			Not used OPEN
39	HOLD	I		Pull up
40	NC			OPEN
41	CS3R	O		Not used Pull up
42	RD	O	C	Read strobe
43	NC			OPEN
44	WR	O	C	Not used OPEN
45	CS3	O	C	Not used OPEN
46	CS2	O	C	Bank address
47	CS1	O	C	Bank address
48	CS0	O	C	External ROM chip select
49	A19	O	C	Address bus 19
50	NC	O	C	OPEN
51-59	A17-9	O	C	Address bus 17-9
60	VDD2			VDD connection
61	A8	O	C	Address bus 8
62	VSS2			GND connection
63-69	A7-1	O	C	Address bus 7-0
70	NC	O	C	OPEN
71-86	D15-0	I/O	C	Data bus 15-0
87-92	KS1-6	I/O	C	key strobe
93	FLSTBY	O	C	FLASH memory stand-by signal
94	AVSS			GND connection
95	FC12ON	O	C	Not used OPEN
96	VREF			GND connection
97	AVCC			VCC connection
98	FLBUSY	I		FLASH memory busy signal
99	NC			OPEN
100	FWRST			Not used

* PD5808A

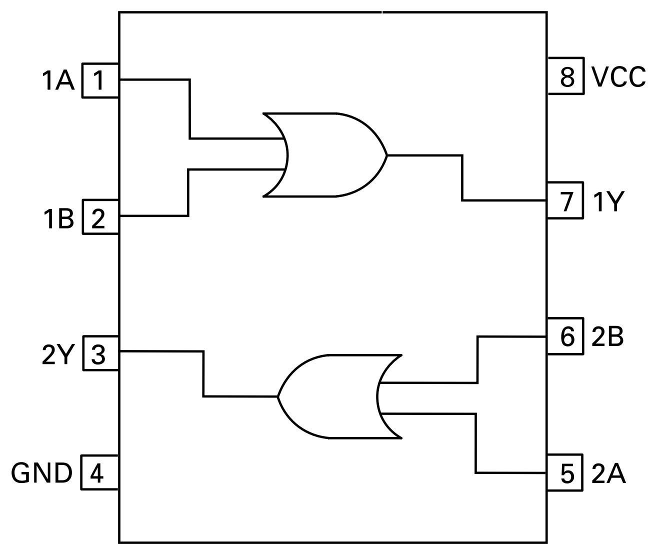


Format	Meaning
C	C MOS
N	N channel open drain

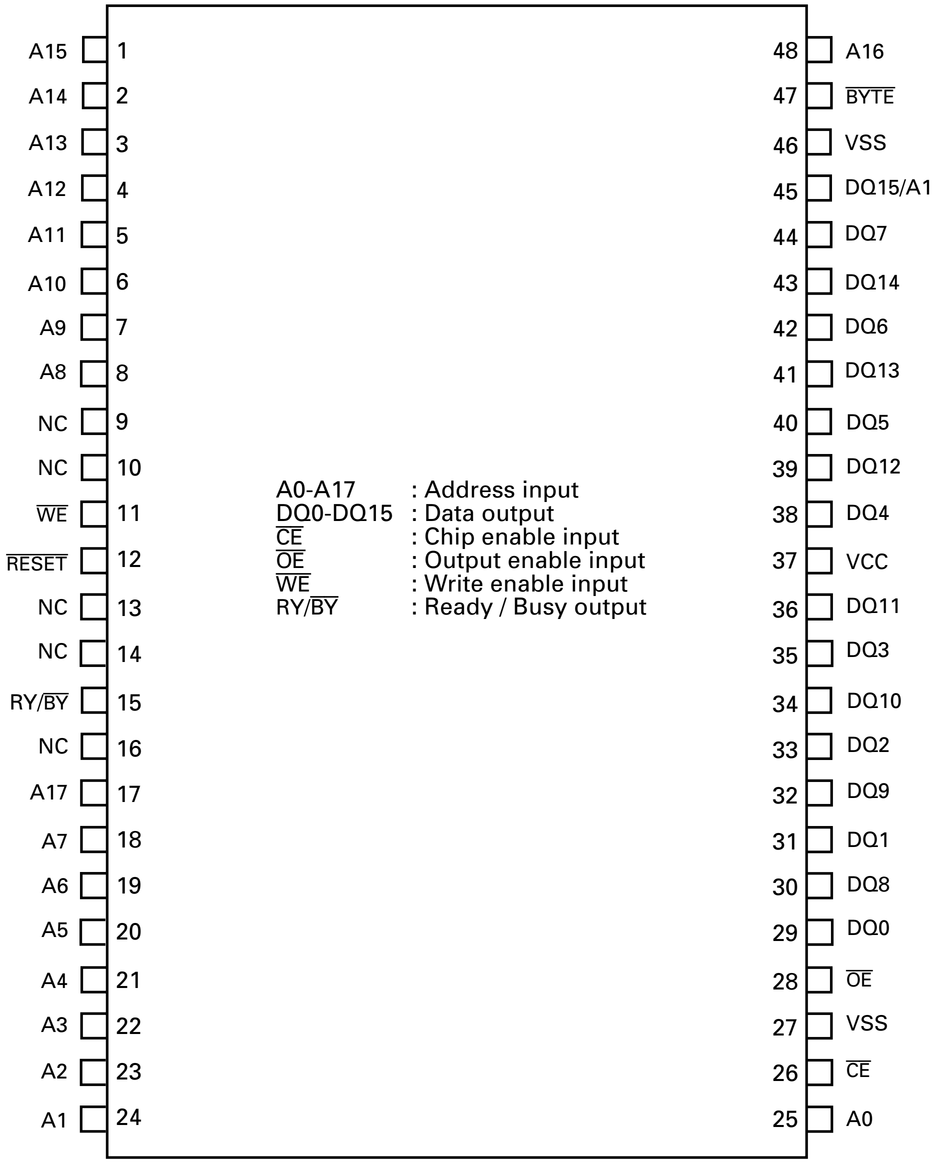
* PD8105A



* TC7WH32FU



* PD6405A



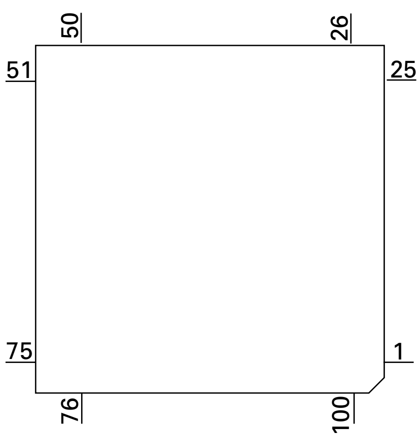
A15 1
A14 2
A13 3
A12 4
A11 5
A10 6
A9 7
A8 8
NC 9
NC 10
WE 11
RESET 12
NC 13
NC 14
RY/BY 15
NC 16
A17 17
A7 18
A6 19
A5 20
A4 21
A3 22
A2 23
A1 24
48 A16
47 BYTE
46 VSS
45 DQ15/A1
44 DQ7
43 DQ14
42 DQ6
41 DQ13
40 DQ5
39 DQ12
38 DQ4
37 VCC
36 DQ11
35 DQ3
34 DQ10
33 DQ2
32 DQ9
31 DQ1
30 DQ8
29 DQ0
28 OE
27 VSS
26 CE
25 A0
A0-A17 : Address input
DQ0-DQ15 : Data output
CE : Chip enable input
OE : Output enable input
WE : Write enable input
RY/BY : Ready / Busy output

● Pin Functions (PE5385A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	BSO	O	C	P-Bus serial data output
2	$\overline{BSCK}$	I/O	/C	P-Bus serial clock input/output
3, 4	DFS1, 2	O	C	DA I/F IC sampling frequency setting output 1, 2
5	DCKS	O	C	DA I/F IC clock subharmonic number selection output
6	EVDD			E power supply Positive power supply
7	EVSS			E power supply GND
8	$\overline{DSPOK}$	I		DSP microcomputer initialization OK input
9	DCOPY	O	C	DA I/F IC copy flag setting output
10	$\overline{CRST}$	O	C	Compression IC reset control output
11, 12	NC			Not used
13	EMPH	O	C	Emphasis information output
14	$\overline{EMPH}$	O	C	Emphasis information output
15	DSPMUTE	O	C	DOUT mute output
16	DSET	O	C	Disc set indicator lighting output
17	$\overline{ADENA}$	O	C	A/D reference voltage supply control output
18	IC/VPP			IC : VSS direct connection/VPP : Pull-down
19	BRXEN	I/O	/C	P-Bus reception is possible
20	$\overline{BSRQ}$	I/O	/C	P-Bus service request demand
21	$\overline{XTALEN1}$	O	C	CD LSI 16.9344MHz oscillation permission output
22	$\overline{XTALEN2}$	O	C	CD LSI 24.576MHz oscillation permission output
23	$\overline{XRST}$	O	C	CD LSI reset control output
24	VDCONT	O	C	VD power supply control output
25	CD3VON	O	C	CD +3.3V power supply control output
26	CONT	O	C	Servo driver power supply control output
27	$\overline{XWAIT}$	I		CD LSI wait control signal input
28	LOEJ	O	C	The direction change output of LOAD/EJECT
29	CLCONT	O	C	Driver input change output
30	CDMUTE	O	C	CD mute control output
31	$\overline{RESET}$	I		System reset input
32	XT1	I		Connected to the oscillator for subclock (connected to VSS via the resistor)
33	XT2			Connected to the oscillator for subclock (Open)
34	REGC			Connected to the capacity stabilizing output of the regulator (an electrolytic capacitor of about 1µF)
35	X2			Oscillator connection for mainclock
36	X1	I		Oscillator connection for mainclock
37	VSS			GND
38	VDD			Positive power supply (5V)
39	CLKOUT	O	C	Internal system clock output (Open)
40	$\overline{XWRITE}$	O		CD LSI write control signal output
41	$\overline{UBEN}$	O		Not used (Open)
42	WR/W	O		WMA decoder Read/Write control signal output
43	$\overline{XREAD}$	O		CD LSI read control signal output
44	XASTB	O		CD LSI address strobe output
45	LOCK	I		Spindle lock input
46	$\overline{WRST}$	O	C	WMA decoder reset control output
47-54	AD0-7	I/O	/C	Address/Data bus 0-7
55	BVDD			B power supply Positive power supply (3.3V)
56	BVSS			B power supply GND
57-64	AD8-15	I/O	/C	Address/Data bus 8-15
65	$\overline{XCS}$	O	C	CD LSI chip selection output
66	$\overline{WCS}$	O	C	WMA decoder chip selection output
67, 68	DBBWRDY0, 1	I		Input of write-ready flag with WMA decoder DBBI0, 1
69, 70	DBBRRDY0, 1	I		Input of read-ready flag with WMA decoder DBBO0, 1
71	AVDD			A power supply Positive power supply (5V)
72	AVSS			A power supply GND
73	AVREF			The reference voltage input for A/D converter
74	VDSENS			VD power supply short sense input
75	DSCSNS			Disc state sense input
76	TEMP			Temperature information sense input

Pin No.	Pin Name	I/O	Format	Function and Operation
77	HOME	I		Home SW sense input
78	$\overline{\text{CSENS}}$	I		Flap closing sense input
79	RFOKIN	I		RFOK input chatter count input
80-82	NC			Connected to AVDD or AVSS via the resistor
83	WMAARI	I		Input of sensing existence of WMA decoder and DA I/F IC
84	TYPE_A/D	I		CD-DA Analog/Digital output change setup
85	$\overline{\text{TESTIN}}$	I		Chip check test program starting input
86	NC			Connected to EVDD or EVSS via the resistor
87	$\overline{\text{XINT}}$			CD LSI interruption signal input
88	$\overline{\text{WINT}}$			WMA decoder interruption signal input
89	$\overline{\text{BRST}}$	I		P-Bus reset input
90	$\overline{\text{EJSW}}$	I		Eject key input
91, 92	NC			Open
93	CLAMP	I	C	CLAMP SW sense input
94	ROMDATA	I/O	/C	E2PROM data input/output
95	ROMCS	O	C	E2PROM chip selection output
96	ROMCK	O	C	E2PROM clock output
97	FRXD	I		For flash rewriting (received signal)
98	FTXD	O	C	For flash rewriting (transmitted signal)
99	AO/DO	O	C	The output for Analog/Digital voice output distinction
100	BSI	I		P-Bus serial data input

* PE5385A



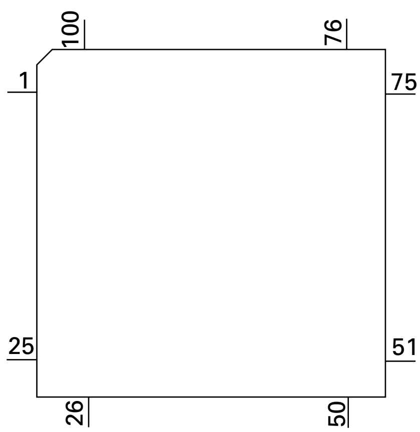
Format	Meaning
C	CMOS

● Pin Function (UPD61002GC)

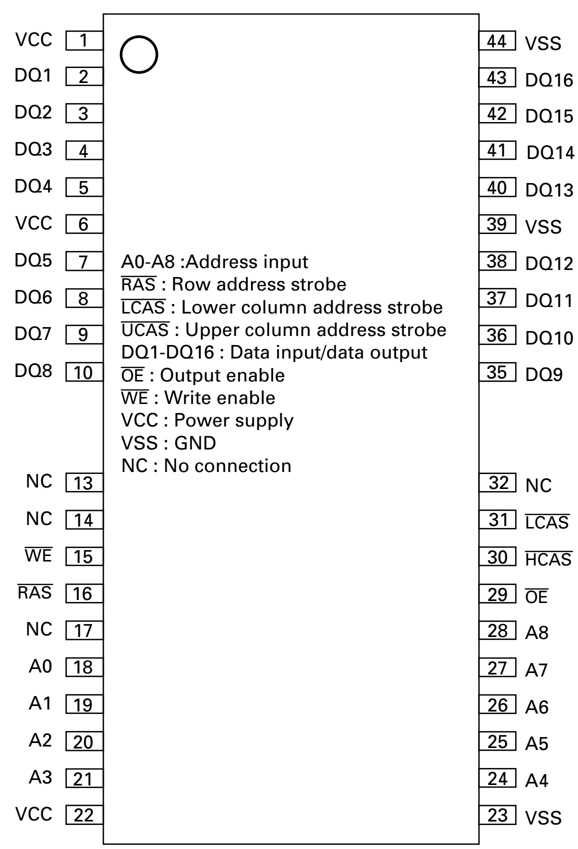
Pin No.	Pin Name	I/O	Function and Operation
1	VDD3	I/O	Power supply (3.3V)
2-4	NC		Not used
5	GND3		GND
6,7	NC		Not used
8	DO0	O	PCM output data
9	VDD2		Power supply (2.5V)
10	CKI	I	Clock input
11	DVDD		Power supply (PLL) (Digital)
12	AVDD		Power supply (PLL) (Analog)
13	AGND		GND (PLL) (Analog)
14	DGND		GND (PLL) (Digital)
15	VDD3I		Interface terminal protection
16	LRCKO	O	PCM output LRCK
17	BCKO	O	PCM output bit clock
18	NC		Not used
19	VDD3		Power supply (3.3V)
20	GND2		GND
21	MCK44	I	Audio master clock input
22	MCK48	I	Audio master clock input
23,24	P10, 11	I/O	Port
25	VDD2		Power supply (2.5V)
26	GND3		GND
27-32	P12-17	I/O	Port
33	VDD2		Power supply (2.5V)
34	P00/INTP00	I/O	Port
35,36	NC		Not used
37	P03/INTP03	I/O	Port
38	P04/INTP04	I/O	Port
39	P05/INTP05	I/O	Port
40	GND2		GND
41,42	P06, 07	I/O	Port
43	VDD3		Power supply (3.3V)
44-49	HAD0-5	I/O	Host address / Data bus
50	GND3		GND
51	VDD3		Power supply (3.3V)
52-55	HAD6-9	I/O	Host address / Data bus
56	GND3		GND
57-59	HAD10-12	I/O	Host address / Data bus
60	VDD2		Power supply (2.5V)
61-63	HAD13-15	I/O	Host address / Data bus
64	VDD3		Power supply (3.3V)
65	HAST	I	Host address strobe
66	HCSB	I	Host chip select
67	HR/WB	I	Host read / Write status
68	HDSTB	I	Host data strobe
69	GND2		GND
70	NC		Not used
71	EXTDIR	I	Bus direction flag from external
72,73	DBBWRDY0, 1	O	DBB write ready flag
74	DBBRRDY0	O	DBB read ready flag
75	VDD2		Power supply (2.5V)
76	GND3		GND
77	DBBRRDY1	O	DBB read ready flag
78	GND3		GND
79	RESETB	I	Reset
80	GND3		GND
81	VDD3		Power supply (3.3V)
82	GND3		GND
83	PLLCONT	I	PLL control
84	GND3		GND

Pin No.	Pin Name	I/O	Function and Operation
85	NC		Not used
86	GND2		GND
87	DI3	I	PCM input data
88	LRCKI3	I	PCM input LRCK
89	BCKI3	I	PCM input bit clock
90	DI2	I	PCM input data
91	LRCKI2	I	PCM input LRCK
92	BCKI2	I	PCM input bit clock
93	DI1	I	PCM input data
94	LRCKI1	I	PCM input LRCK
95	BCKI1	I	PCM input bit clock
96	VDD2		Power supply (2.5V)
97	DI0	I	PCM input data
98	LRCKI0	I	PCM input LRCK
99	BCKI0	I	PCM input bit clock
100	GND2		GND

* UPD61002GC



MSM51V4265EP-70TS

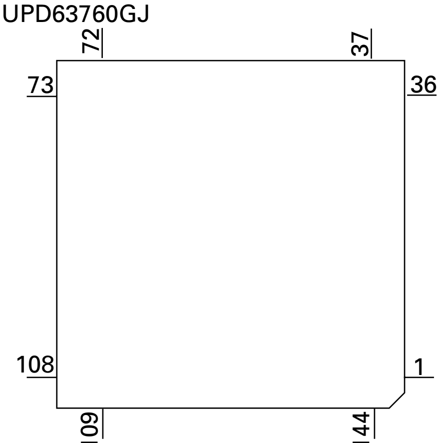


● Pin Functions (UPD63760GJ)

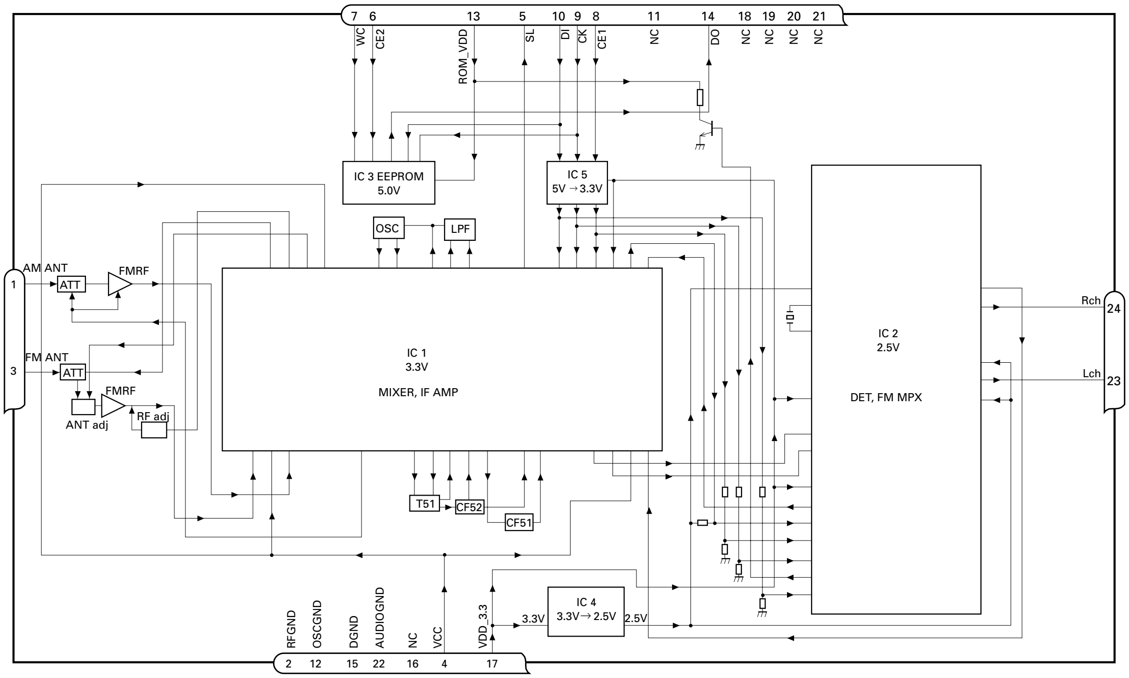
Pin No.	Pin Name	I/O	Function and Operation
1	R.GND		GND for DRAM I/F
2	RST	I	Input of reset
3-7	AB12-8	I	Address bus 12-8 from the microcomputer
8-15	AD7-0	I/O	Address/data bus 7-0 to the microcomputer
16	CS	I	Chip selection
17	ASTB	I	Address strobe
18	READ	I	Control signals (read)
19	WRITE	I	Control signals (write)
20	WAIT	O	Control signals (wait)
21	INTQ		Interruption signals to the external microcomputer
22	IFMODE	I	Switching between the data buses (16bit/8bit)
23	D.VDD		Power supply for digital circuits
24	XTALEN1	I	Permission to oscillate 16.9344MHz
25	XTALEN2	I	Permission to oscillate 24.576MHz
26	DA.VDD		Power supply for DAC
27	ROUT	O	Output of audio for the right channel
28	DA.GND		GND for DAC
29	R+	O	Output of the right channel audio PWM
30	R-	O	Output of the right channel audio PWM
31	REGC		Connected to the capacitor for band gap
32	L-	O	Output of the left channel audio PWM
33	L+	O	Output of the left channel audio PWM
34	DA.GND		GND for DAC
35	LOUT	O	Output of audio for the left channel
36	DA.VDD		Power supply for DAC
37	X.VDD		Power supply for the crystal oscillator
38	XTAL1		Connected to the crystal oscillator (16.9344MHz)
39	XTAL1		Connected to the crystal oscillator (16.9344MHz)
40, 41	X.GND		Ground for the crystal oscillator
42	XTAL2		Connected to the crystal oscillator (24.576MHz)
43	XTAL2		Connected to the crystal oscillator (24.576MHz)
44	X.VDD		Power supply for the crystal oscillator
45	D.GND		GND for digital circuits
46	DIN	I	Input of audio data
47	DOUT	O	Output of audio data
48	SCKIN	I	Clock input for audio data
49	SCKO	O	Clock output for audio data
50	LRCKIN	I	Input of LRCK for audio data
51	LRCK	O	Output LRCK for audio data
52	TESTX	O	Output for tests
53	RFOK	O	Output of RFOK
54	C16M	O	Output of 16.9344MHz
55	TESTEN	I	Connected to GND
56	TEST4	I	Connected to GND
57	D.VDD		Power supply for digital circuits
58	RFCK/HOLD	O	Output of RFCK/HOLD signal
59	WFCK/MIRR	O	Output of WFCK/MIRR signal
60	PLCK	O	Output of PLCK
61	LOCK	O	Output of LOCK
62	C1D1	O	Information on error correction
63	C1D2	O	Information on error correction
64	C2D1(RMUTE)	O	Information on error correction (mute for Rch)
65	C2D2(LMUTE)	O	Information on error correction (mute for Lch)
66	C2D3	O	Information on error correction
67	D.GND		Ground for digital circuits
68	RAS	O	Output of DRAM RAS
69	CAS0	O	Output of DRAM Lower CAS
70	CAS1	O	Output of DRAM Upper CAS
71	WE	O	Output of DRAM WE
72	OE	O	Output of DRAM OE

Pin No.	Pin Name	I/O	Function and Operation
73-88	RDB0-15	I/O	Input/output of DRAM Data0-15
89	D.GND		Ground for digital circuits
90-99	RA0-9	O	Output of DRAM Address0-9
100	D.VDD		Power supply for digital circuits
101-104	TEST0-3	I	Connected to GND
105	FD	O	Output of focus drive PWM
106	TD	O	Output of tracking drive PWM
107	SD	O	Output of thread drive PWM
108	MD	O	Output of spindle drive PWM
109	A.VDD		Power supply for the analog system
110	ATEST	O	Analog tests
111	EFM	O	Output of EFM signals
112	ASY	I	Input of asymmetry
113	C3T		Connection to the capacitor for detecting 3T
114	A.GND		Ground for the analog system
115	RFI	I	Input of RF
116	AGCO	O	Output of RF
117	AGCI	I	Input of AGC
118	RFO	O	Output of RF(AGC)
119, 120	EQ2, 1		Equalizer 2, 1
121	RF2-	I	Reversal input of RF2
122	RF-	I	Reversal input of RF
123	A.GND		Ground for the analog system
124	A	I	Input of A
125	C	I	Input of C
126	B	I	Input of B
127	D	I	Input of D
128	F	I	Input of F
129	E	I	Input of E
130	A.VDD		Power supply for the analog system
131	REFOUT	O	Output of reference voltage
132	REFC		Connected to the capacitor for output of REFOUT
133	FE-	I	Reversal input of FE
134	FEO	O	Output of FE
135	TE-	I	Reversal input of TE
136	TEO	O	Output of TE
137	TE2	O	TE2
138	TEC	I	TEC
139	A.GND		Ground for the analog system
140	LDREGO	O	Output of REG voltage for APC
141	PD	I	Input of PD
142	LD	O	Output of LD
143	PN	I	Assignment of pickup polarity
144	A.VDD		Power supply for the analog system

* UPD63760GJ

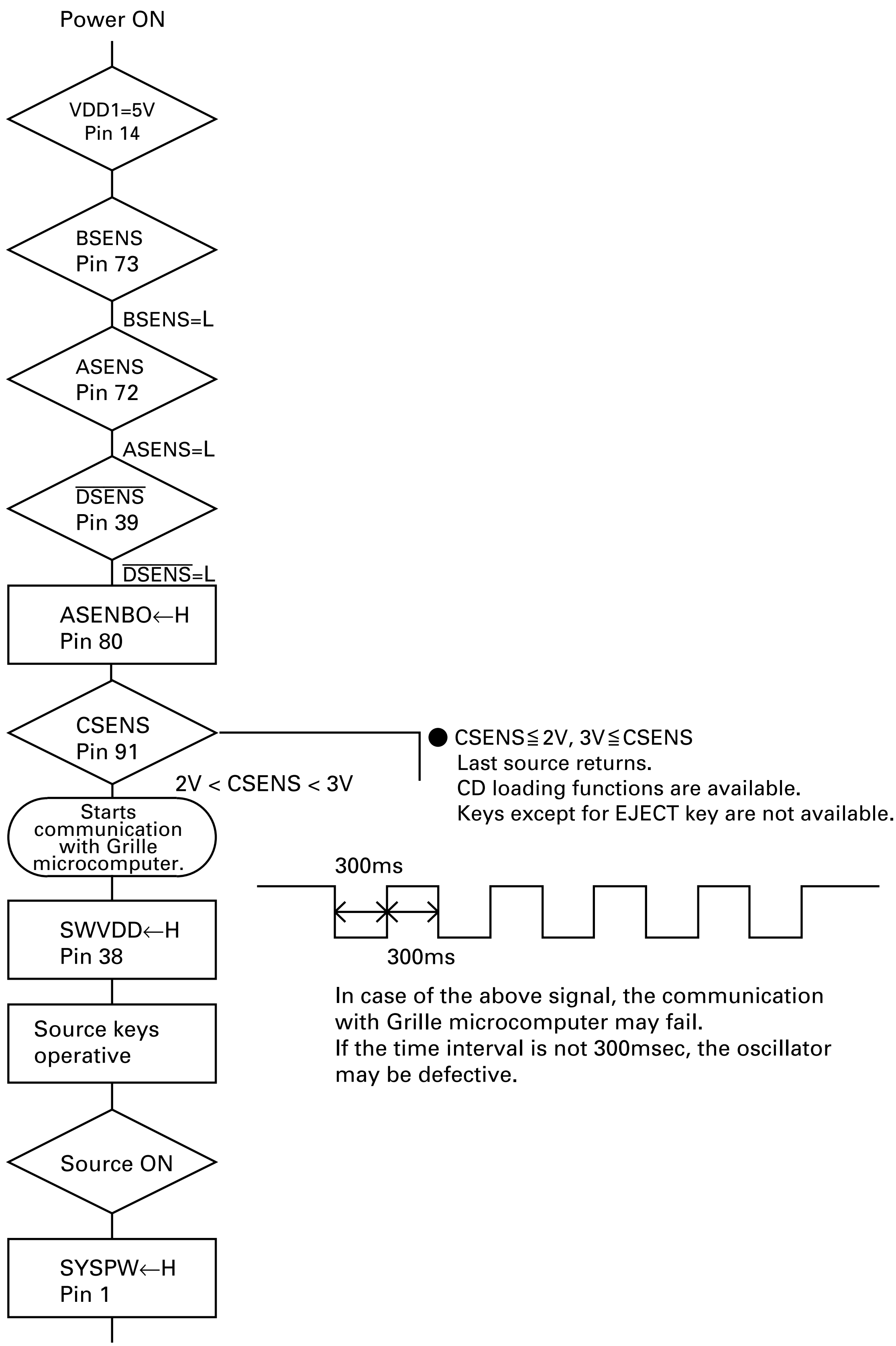


● FM/AM Tuner Unit



No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7μH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the ham of power transmission line.
2	RFGND		RF ground	Ground of antenna block
3	FMANT	I	FM antenna input	Input of FM antenna 75Ω Surge absorber(DSP-201M-S00B) is necessary.
4	VCC		power supply	The power supply for analog block. D.C 8.4V ± 0.3V
5	SL	O	signal level	Output of FM/AM signals level
6	CE2	I	chip enable-2	Chip enable for EEPROM ”Low” active
7	WC	I	write control	You can write EEPROM, when EEPROM write control is “Low”. Ordinary non connection
8	CE1	I	chip enable-1	Chip enable for AF•RF ”High” active
9	CK	I	clock	Clock
10	DI	I	data in	Data input
11	NC		non connection	Not used
12	OSCGND		osc ground	Ground of oscillator block
13	ROM_VDD		power supply	Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out	Data output
15	DGND		digital ground	Ground of digital block
16	NC		non connection	Not used
17	VDD_3.3		power supply	The power supply for digital block. 3.3V ± 0.2V
18	NC		non connection	Not used
19	NC		non connection	Not used
20	NC		non connection	Not used
21	NC		non connection	Not used
22	AUDIOGND		audio ground	Ground of audio block
23	L ch	O	L channel output	FM stereo “L-ch” signal output or AM audio output
24	R ch	O	R channel output	FM stereo “R-ch” signal output or AM audio output

7.3 OPERATIONAL FLOW CHART



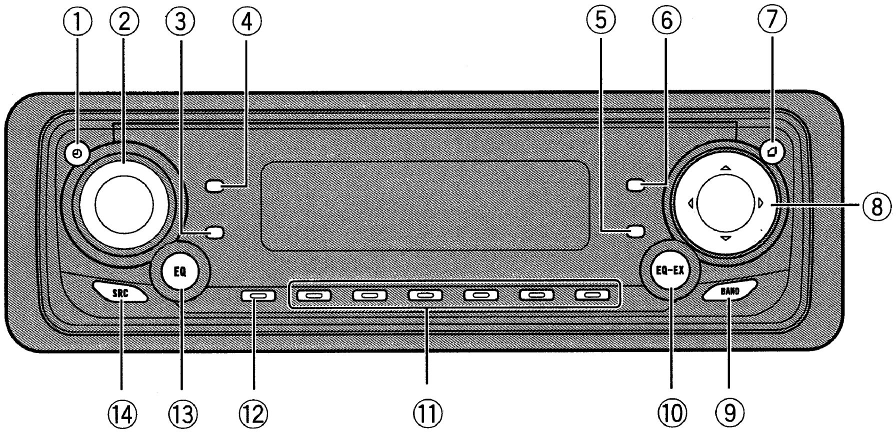
Completes power-on operation.
(After that, proceed to each source operation)

7.4 CLEANING

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

8. OPERATIONS



Head unit

① **CLOCK button**
Press to change to the clock display.

② **VOLUME**
When you press **VOLUME**, it extends outward so that it becomes easier to turn. To retract **VOLUME**, press it again. Rotate to increase or decrease the volume.

③ **DISPLAY button**
Press to select different displays.

④ **PAUSE button**
Press to turn pause on or off.

⑤ **FUNCTION button**
Press to select functions.

⑥ **AUDIO button**
Press to select various sound quality controls.

⑦ **OPEN button**
Press to open the front panel.

⑧ **▲/▼/◀/▶ buttons**
Press to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.

⑨ **BAND button**
Press to select among three FM and one AM bands and cancel the control mode of functions.

⑩ **EQ-EX button**
Press and hold to switch between EQ-EX and SFEQ functions. Press to operate each function.

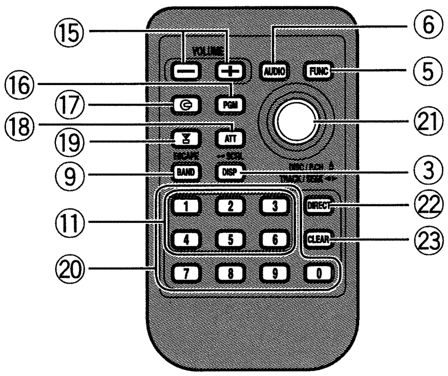
⑪ **1–6 buttons**
Press for preset tuning and disc number search when using a multi-CD player.

⑫ **ENTERTAINMENT button**
Press to change to the entertainment display.

⑬ **EQ button**
Press to select various equalizer curves.

⑭ **SOURCE button**
This unit is turned on by selecting a source. Press to cycle through all of the available sources. ■

● DEH-P750MP/XN/UC, DEH-P7500MP/XN/UC



Remote control

Operation is the same as when using the button on the head unit.

⑮ **VOLUME button**
Press to increase or decrease the volume.

⑯ **PGM button**
Press to operate the preprogrammed functions for each source.

⑰ **CD button**
Press to select the built-in or multi-CD player as the source.

⑱ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

⑲ **TUNER button**
Press to select the tuner as the source.

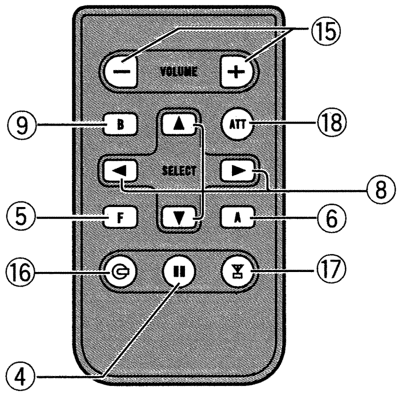
⑳ **NUMBER buttons**
Press to enter the number for selecting an XM channel directly, in direct channel select mode when using an XM tuner.

㉑ **Joystick**
Move to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions. Functions are the same as ▲/▼/◀/▶ buttons.

㉒ **DIRECT button**
Press to do direct channel select when using an XM tuner.

㉓ **CLEAR button**
Press to cancel the input number while **NUMBER** are used. ■

● DEH-P7550MP/XN/ES



Remote control

Operation is the same as when using the button on the head unit.

⑮ **VOLUME button**
Press to increase or decrease the volume.

⑯ **CD button**
Press to select the built-in or multi-CD player as the source.

⑰ **TUNER button**
Press to select the tuner as the source.

⑱ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level. ■

Turning the unit on

● **Press SOURCE to turn the unit on.**

When you select a source the unit is turned on. ■

Selecting a source

You can select a source you want to listen to. To switch to the built-in CD player, load a disc in this unit .

● **When using the head unit, press SOURCE to select a source.**

Press **SOURCE** repeatedly to switch between the following sources:

XM tuner—Tuner—Television—DVD player/Multi-DVD player—Built-in CD player—Multi-CD player—External unit 1—External unit 2—AUX

● **When using the remote control, press TUNER or CD to select a source.**

Press each button repeatedly to switch between the following sources:

TUNER: **XM tuner—Tuner—Television—Sources off**

CD: **DVD player/Multi-DVD player—Built-in CD player—Multi-CD player—Sources off**

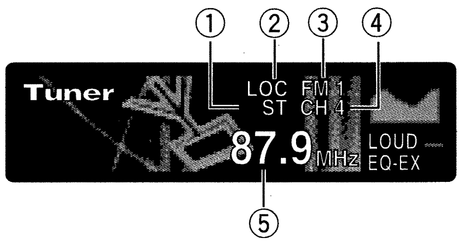
Notes

- In the following cases, the sound source will not change:
  - — When a unit corresponding to each source is not connected to this unit.
  - — When no disc is set in this unit.
  - — When no disc is set in the DVD player.
  - — When no magazine is set in the multi-CD player.
  - — When no magazine is set in the multi-DVD player.
  - — When the AUX (auxiliary input) is set to off.
- External unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this unit. Two external units can be controlled by this unit. When two external units are connected, the allocation of them to external unit 1 or external unit 2 is automatically set by this unit.
- When this unit's blue/white lead is connected to the car's auto-antenna relay control terminal, the car's antenna extends when this unit's source is turned on. To retract the antenna, turn the source off. ■

Turning the unit off

● **Press SOURCE and hold until the unit turns off.** ■

Listening to the radio



These are the basic steps necessary to operate the radio.

① **Stereo (ST) indicator**
Shows that the frequency selected is being broadcast in stereo.

② **LOC indicator**
Shows when local seek tuning is on.

③ **Band indicator**
Shows which band the radio is tuned to, AM or FM.

④ **Preset number indicator**
Shows what preset has been selected.

⑤ **Frequency indicator**
Shows to which frequency the tuner is tuned.

1 Press SOURCE to select the tuner.
Press **SOURCE** until you see **Tuner** displayed.

2 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.

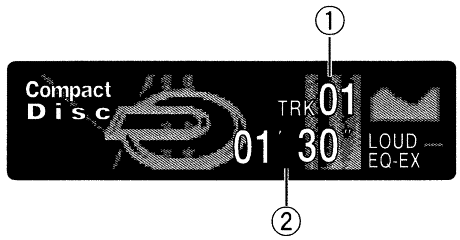
3 Press BAND to select a band.
Press **BAND** until the desired band is displayed, **FM1**, **FM2**, **FM3** for FM or **AM**.

4 To perform manual tuning, press ◄ or ► with quick presses.
The frequencies move up or down step by step.

5 To perform seek tuning, press and hold ◄ or ► for about one second and release.
The tuner will scan the frequencies until a broadcast strong enough for good reception is found.

- You can cancel seek tuning by pressing either ◄ or ► with a quick press.
- If you press and hold ◄ or ► you can skip broadcasting stations. Seek tuning starts as soon as you release the buttons. ■

Playing a CD



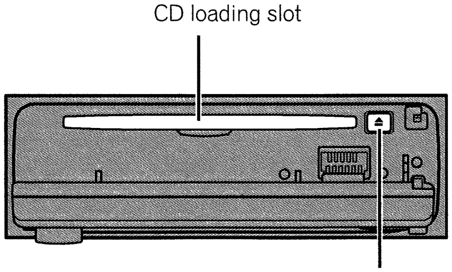
These are the basic steps necessary to play a CD with your built-in CD player.

① **Track number indicator**
Shows the track currently playing.

② **Play time indicator**
Shows the elapsed playing time of the current track.

1 Press OPEN to open the front panel.
CD loading slot appears.
■ After a CD has been inserted, press **SOURCE** to select the built-in CD player.

2 Insert a CD into the CD loading slot.
Playback will automatically start.



■ You can eject a CD by pressing **EJECT**.
■ To avoid a malfunction, make sure that no metal object comes into contact with the terminals when the front panel is open.

3 Close the front panel.

4 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.

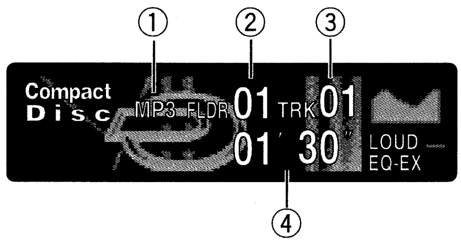
5 To perform fast forward or reverse, press and hold ◄ or ►.
■ If you select the search method to **ROUGH SEARCH**, pressing and holding ◄ or ► enables you to search every ten track in the current disc.

6 To skip back or forward to another track, press ◄ or ►.
Pressing ► skips to the start of the next track. Pressing ◄ once skips to the start of the current track. Pressing again will skip to the previous track.

Notes

- The built-in CD player plays one, standard, 12-cm or 8-cm (single) CD at a time. Do not use an adapter when playing 8-cm CDs.
- Do not insert anything other than a CD into the CD loading slot.
- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting the disc again.
- If the built-in CD player does not operate properly, an error message such as **ERROR-11** may be displayed.
- When a CD TEXT disc is inserted, the disc and track titles begin to scroll to the left automatically. ■

Playing a MP3/WMA



These are the basic steps necessary to play an MP3/WMA with your built-in CD player.

① **MP3/WMA indicator**
Shows when the MP3/WMA file is playing.

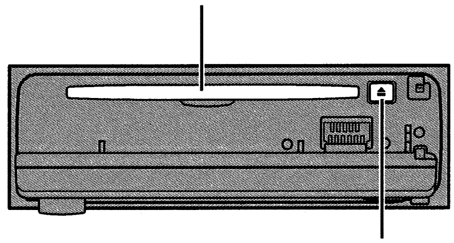
② **Folder number indicator**
Shows the folder number currently playing.

③ **Track number indicator**
Shows the track (file) currently playing.

④ **Play time indicator**
Shows the elapsed playing time of the current track (file).

1 Press OPEN to open the front panel.
CD loading slot appears.
■ After a CD-ROM has been inserted, press **SOURCE** to select the built-in CD player.

2 Insert a CD-ROM into the CD loading slot.
Playback will automatically start.



■ You can eject a CD-ROM by pressing **EJECT**.
■ To avoid a malfunction, make sure that no metal object comes into contact with the terminals when the front panel is open.

3 Close the front panel.

4 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.

5 Press ▲ or ▼ to select a folder.
■ You cannot select a folder that does not have an MP3/WMA file recorded in it.
■ To return to folder 01 (ROOT), press and hold **BAND**. However, if folder 01 (ROOT) contains no files, playback commences with folder 02.

6 To perform fast forward or reverse, press and hold ◄ or ►.
■ This is fast forward and reverse operation only for the file being played. This operation is canceled when the previous or next file is reached.
■ If you select the search method to **ROUGH SEARCH**, pressing and holding ◄ or ► enables you to search every ten track in the current folder.

7 To skip back or forward to another track, press ◄ or ►.
Pressing ► skips to the start of the next track. Pressing ◄ once skips to the start of the current track. Pressing again will skip to the previous track.

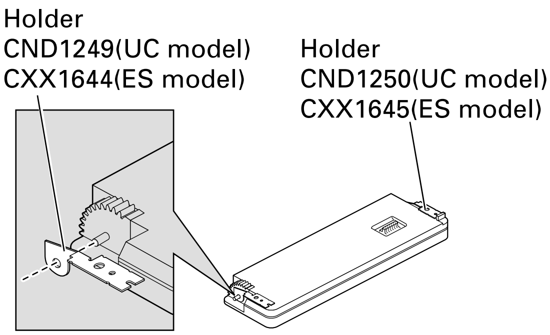
Notes

- When playing discs with MP3/WMA files and audio data (CD-DA) such as CD-EXTRA and MIXED-MODE CDs, both types can be played only by switching mode between MP3/WMA and CD-DA with **BAND**.
- If you have switched between playback of MP3/WMA files and audio data (CD-DA), playback starts at the first track on the disc.
- The built-in CD player can play back an MP3/WMA file recorded on CD-ROM.
- Do not insert anything other than a CD into the CD loading slot.
- There is sometimes a delay between starting up playback and the sound being issued. This is particularly the case when playing back multi-session and many folders. When being read in, **Format Read** is displayed.
- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting the disc again.
- Playback is carried out in order of file number. Folders are skipped if they contain no files. (If folder 01 (ROOT) contains no files, playback commences with folder 02.)
- When playing back files recorded as VBR (variable bit rate) files, the play time will not be correctly displayed if fast forward or reverse operations are used.
- If inserted disc contains no files that can be played back, **No Audio** is displayed.
- There is no sound on fast forward or reverse.
- If the built-in CD player does not operate properly, an error message such as **ERROR-11** may be displayed.
- When an MP3/WMA disc is inserted, folder name and file name begin to scroll to the left automatically. ■

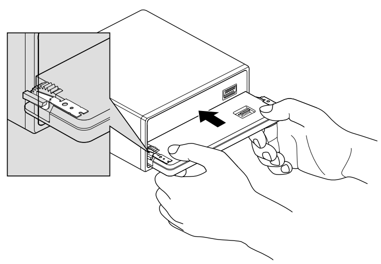
Fixing the front panel

If you do not operate the removing and attaching the front panel function, use the supplied fixing screws and holders to fix the front panel to this unit.

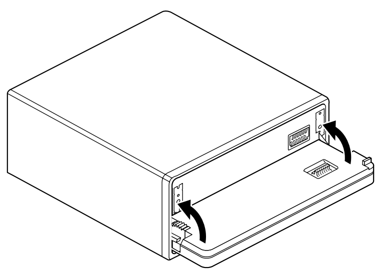
1. Attach the holders to both sides of the front panel.



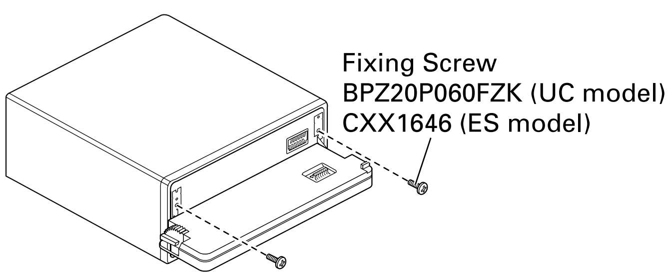
2. Replace the front panel to the unit.



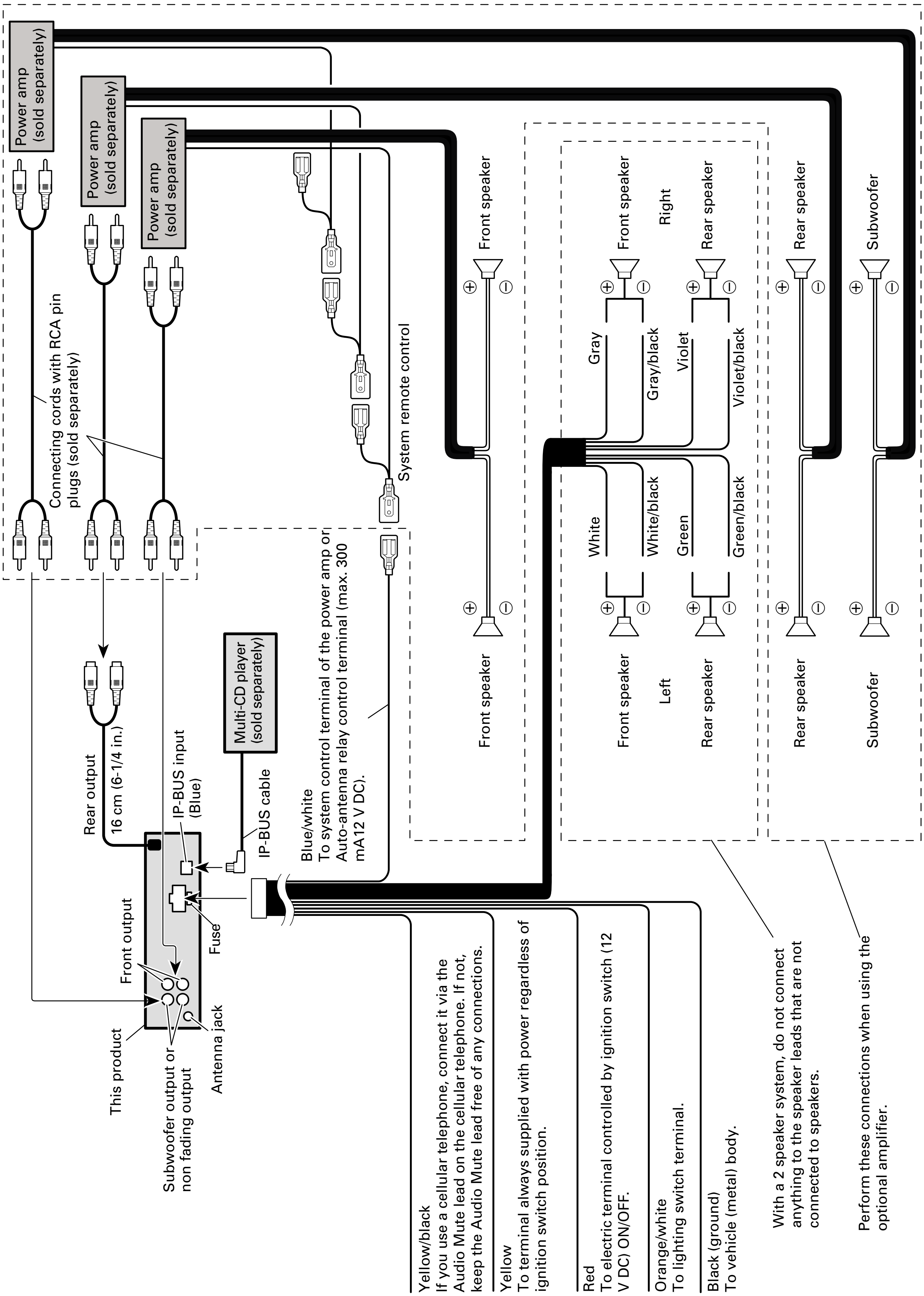
3. Flip the holders into upright positions.

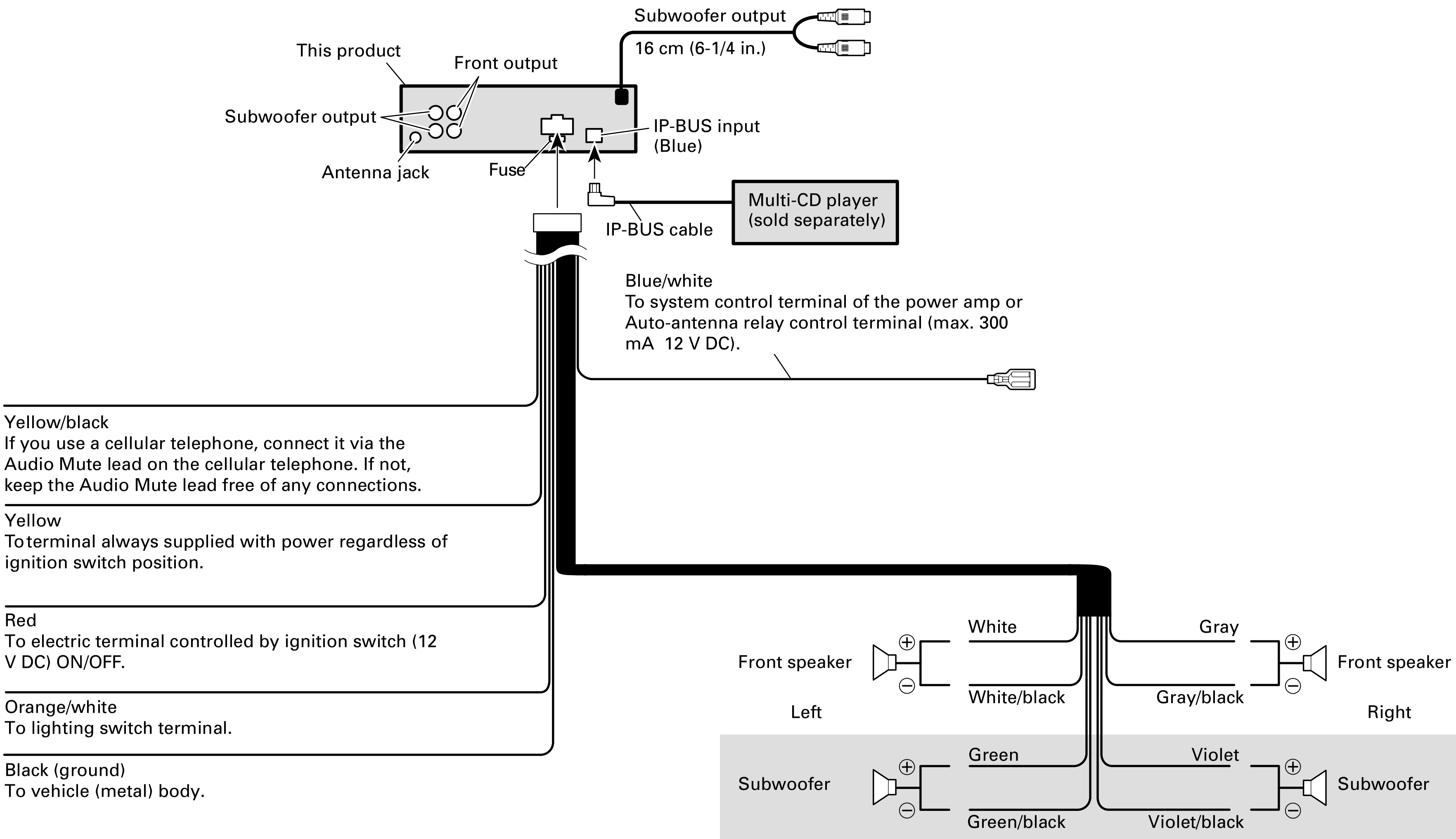


4. Fix the front panel to the unit using fixing screws.



● Connection Diagram





Note:
Change the initial setting of this unit (refer to the Operation Manual).The subwoofer output of this unit is monaural.